



He's back – and this time he's searching for Atlantis

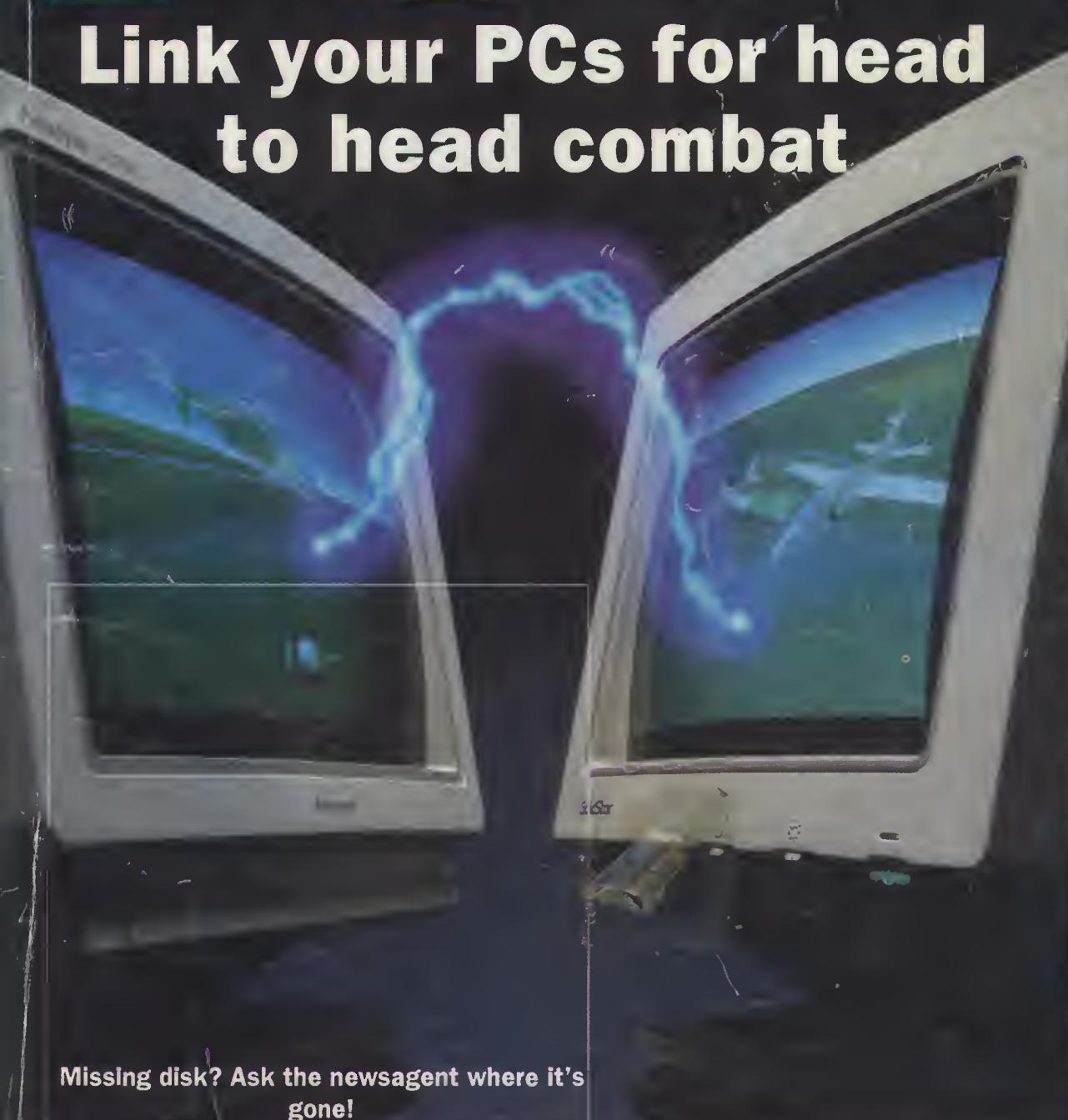
Walk like an Egyptian in Laura Bow 2

**ISSUE 9
JULY 1992**

PC review

An EMAP Images publication

Link your PCs for head to head combat



Missing disk? Ask the newsagent where it's gone!



3½ DISK £2.95
Also available with 5½ Disk



Shadowlands: a very British RPG?



War games – full of hex appeal?



The trouble with Ultima VII ...



DOS without tears



Finding your way around Heimdall



ROLE PLAY FOR PC

The Legend of Darkmoon continues

The famous role model for all AD&D® role-playing fantasies, the dreaded Temple Darkmoon is back.

More sinister, terrifying and haunting than ever. It will slowly weave into your sub-conscious and refuse to let go.



Through a clearing in the shadowy forest, a trio of towers rise menacingly into the night sky. You are on the threshold of terror, one wrong move and it's curtains. Finito.

The exciting sequel to Eye of the Beholder is here. Bigger. Better. And so realistic you'll keep looking over your shoulder.

The improved "point 'n' click" interface lets you come face-to-face with the most gruesome characters and complex clues.

In fact, you'll only want to stop playing this State-of-the-Art adventure game for one reason. To pinch yourself and prove you're not in the middle of a nightmare.

Available on: PC (EGA, VGA/ MCGA (256 Colour), 640k RAM and Hard disk required. Supports AdLib™, Soundblaster™ and compatibles). Amiga version coming soon.

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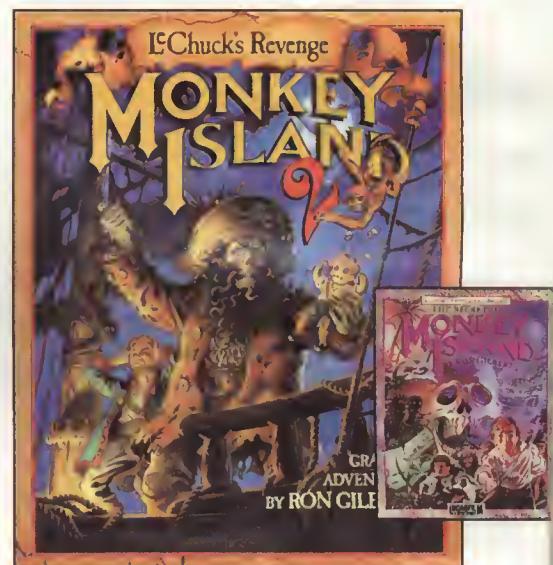


LAUGHS FOR PC

Side-splitting pirate adventure

Just when you thought it was le end for LeChuck, he's back.

The legend states that "when LeChuck wants you dead, you're dead"- grim news for his old adversary, young Guybrush Threepwood.



But fear not. Big Whoop holds the key to great power. All is not lost.

In this stunning graphic sequel, young Guybrush's adventures will have you rolling in hysterics. Beware, you'll laugh so hard, milk will flow from your nose.

Behind every pirate is a really gnarly chair and in front of Guybrush is a saga so savage it'll put hairs on your chest.



With 256 colours (PC version), variable difficulty modes, interactive reggae music and "point 'n' click" interface, you'll be transported to Monkey Island in a flash.

So, brace yourself, the fun starts here. Who knows when it will stop?

Available on: Amiga (32 colours) and PC (VGA/ MCGA). Requires 640k Ram AT or compatible. Supports AdLib™, Roland™, Soundblaster™ and SoundMaster™ II sound cards. Hard drive required.

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LucasArts
Lucasfilm Games



A serious PC experience

U.S. Gold Ltd., Units 2/3, Holford Way, Holford, Birmingham B6 7AX. Tel: 021 625 3366

SPORT FOR PC

Play a round All year round

It's raining cats and dogs outside, but it's a beautiful crisp Spring day on the Torrey Pines Golf Course.

You approach the tee, driver in hand. Gazing down the fairway, you notice every feature of this classic Pacific Ocean Links course.



The Challenge of Golf takes you to a new level of realism. You can almost smell the grass, feel the silky putting surfaces and take in the fresh sea air. At times, you'll want to replace the divots, until you remember it's only a game.



But WOW, what a game!

And now, the 256 colour 3D graphics can be enjoyed on another six championship courses: Bountiful Municipal, Firestone CC South, Bayhill, Pinehurst, Barton Creek and Hyatt Dorado.

So, put on your sun visor and practice your swing. You're next on the tee.

Available on:
PC (VGA or MCGA,
640k and Hard disk
required. Supports:
AdLib™, Soundblaster™,
MSound™ sound cards)

Amiga version coming soon.



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ACCESS



FLIGHT FOR PC

A Simulation to take your breath away

Hard on the tail of Jetfighter I, the mind-blowing combat sequel is airborne.

Jetfighter II: Advanced Tactical Fighter shoots Top Gun down in flames.



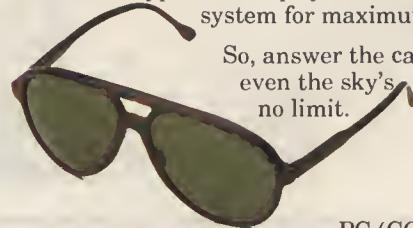
Strap yourself in as the most advanced and powerful 3D technology takes to the skies, with you as pilot whatever the time of day or night.

Revolutionary animation lets you see parachutes opening in the wind, radar chaff blooming behind your jet and feel the landing gear deploy and retract.

Dogfights take on a different dimension with real time artificial intelligence. Includes F/A-18 Hornet, F-16 Falcon and F-14 Tomcat.



Features instant flying mode for beginners, interactive hypertext help system and tunable joystick system for maximum response.



So, answer the call of the wild. Now, even the sky's no limit.

Available on:
PC (CGA/Tandy (4 Colour),
EGA (16 colour) VGA (256 Colour). 640k RAM
required. Supports AdLib™ and Soundblaster™
sound cards. Hard drive recommended.

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VELOCITY

A serious PC experience

SCREENSHOTS ARE ONLY INTENDED TO BE ILLUSTRATIVE OF THE GAMEPLAY AND NOT THE SCREEN GRAPHICS WHICH MAY VARY
CONSIDERABLY BETWEEN DIFFERENT FORMATS IN QUALITY AND APPEARANCE AND ARE SUBJECT TO THE COMPUTER'S SPECIFICATIONS

PCs FOR TWO

Since there's been another flurry of articles in the papers about computer gaming being an addictive and unsocial activity, PC Review is pleased to tell you how you can play PC games and see your friends as well. The idea of serial linking PCs for two-player, simultaneous play is not a new one and a number of games support the feature, but too many people believe that you'll need a modem and a mastery of baud rates and protocols to play. In fact, as Paul Presley explains on page 34, it's pretty simple, and hugely enjoyable.

It's good to see British design and programming teams tackling a full-blown RPG in Shadowlands (reviewed on page 40). This is just one area where US-based companies have held a virtual monopoly for years. Now British programmers have a world-wide reputation for technical proficiency and imagination, and we'd like to see much more in the way of home-grown RPGs (Gremlin's Daemonsgate should help to make up the numbers, when it finally hits the shops next month), native flight simulations (for which Digital Integration and occasionally Domark are sole standard bearers), and more in the way of the graphically-led adventure in the Dynamix style (which is where Lure of the Temptress just might make a splash).

As we report in this month's News pages, Amstrad has responded to criticisms of its 5286 Games Pack on the grounds that the core 80286 processor wasn't powerful enough. Enter the Family Pack, with similar extras, and a similar design, but using a 386SX PC for the heart of the bundle. This is a much better prospect, and if you're torn between Amstrad's Family Pack and the Games pack, I'd seriously consider finding the extra £200 for the increase in power.

Finally, it has been brought to our attention that we have been seriously underestimating the price of Prince of Persia in our Classics section. Although the game has been available for some time at budget prices on the Amiga and ST machines, I'm afraid the PC version is still full-price, at £30.64. We'll make sure our lists are amended as soon as possible.

Christina Erskine



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EMAP Images, Priory Court, 30-32 Farringdon Lane, London EC1R 3AU Tel: 071-972 6700
Fax: 071-972 6710 E-Mail: pcreview@cix.compulink.co.uk
Subscriptions and back issues (0858) 410510

EDITORIAL

Editor Christina Erskine
Deputy editor Laurence Scotford
Art editor Gareth Jones
Production editor Paula Shields

FEATURE

20 DOS TAMERS

if you're finding struggling with the DOS prompt a pain

, and typing in commands is all too time-consuming, you might fare better with one of these file management programs designed to make your life with DOS easier. Huw Collingbourne reports.



25 WAR GAMES

War games have a devoted

COVER DISK

88 DISK 9

The Bitmap Brothers have done us proud again, with a special playable level from their forthcoming platform game Magic Pockets.

Then there's the Cool Croc Twins, two cartoon-style characters vying for the charms of Daisy Crocette, in this arcade style game from Empire. We've got four levels from the game for you to play on the Cover Disk.

And that's not all: Wilf is an entertaining maze game, while, in true 1992 spirit, we have Dynamo, a version of European draughts for you.



Picture researcher Rob Carter
Staff writer Paul Presley

Contributors Paul Boughton, Ciarán Brennan, Tim Carrigan, Huw Collingbourne, Gordon Houghton, Mike James, Wayne Legg, Robin Matthews, Paul Rigby
Cover photo Ed Park

ADVERTISING

Advertisement manager Nigel Taylor
Advertising sales executive Melanie Costin
Advertising production Tina Gynn

cult following on the PC. Robin Matthews looks at the history of war games and picks out some of the outstanding products of the genre for the war gaming novice or someone looking to expand their collection. Plus, Laurence Scotford talks to Dr Peter Turcan, one of the country's foremost war game designers about his thoughts on the development and future of war gaming.

30 PC PERIPHERALS

Having dealt largely with internal expansion possibilities on the PC up until now, this month's First Steps guide looks at some of the devices and add-ons you can plug into those sockets at the back to enhance your PC's performance and expand its range.



COVER STORY

34 LINK YOUR PCs FOR HEAD TO HEAD COMBAT

Take two PCs, one game and one serial link cable ... and you have a playing experience unlike any other: dogfighting in Falcon 3.0, struggling for world domination in Populous, or playing MicroProse Golf directly against your human opponent, Paul Presley takes you through the games made for two, and shows you how to make the right connections. Plus, a look at some of games that are networked in the US, and the future of networked games in the UK.



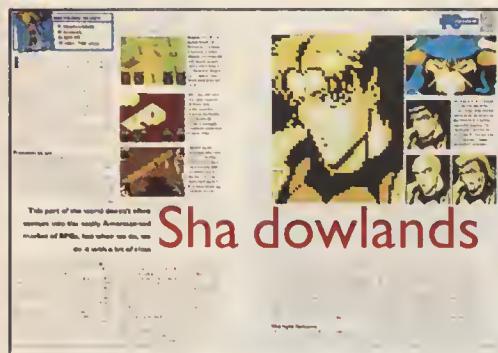
REGULARS

7 News

Amstrad's new Family pack, and the fate of Ad Lib, the company behind the MSC and Gold Card sound-boards.

14 Coming soon

Interplay has signed up veteran astronaut Buzz Aldrin to front its space strategy simulation, while Sierra's Dagger of Amon Ra stars Laura Bow and a distinctly Egyptian-looking New York.



39 Reviews

RPG addicts should enjoy Shadowlands, while Indiana Jones makes his latest appearance on the small screen, courtesy of US Gold. Plus the Giger-designed Dark Seed.

76 Tips

The Gods guide finally reaches its conclusion; plus maps for Heimdall and a comprehensive guide to Star Trek.

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Publishing director Mike Frey
Marketing manager Marc Swallow
Marketing executives Sarah Ewing, Sarah Hillard
Managing director Terry Pratt

IN EUROPE

European production manager Paul Boughton
France Jean-Michel Blottiére **Germany** Heinrich Lenhardt **Italy** Riccardo Albini **Spain** Oscar Esteban

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YOU OVERCAME THE GODS? THESE HANDSOME SPECIMENS WILL BRING YOU DOWN TO EARTH!

In Populous, you challenged the gods. Now man is your adversary in the form of three unscrupulous and violent tribal leaders.

Be as mean as them and match force with force, or be more cunning, play Mr Nice Guy and win over the local villagers.

By doing so you not only swell your numbers, but also keep your larders stocked, which is essential in ensuring the loyalty of your army.

With the stunning graphics you've come to expect from Bullfrog.

Powermonger is a living world of mountains, forests and rivers, sun, snows and

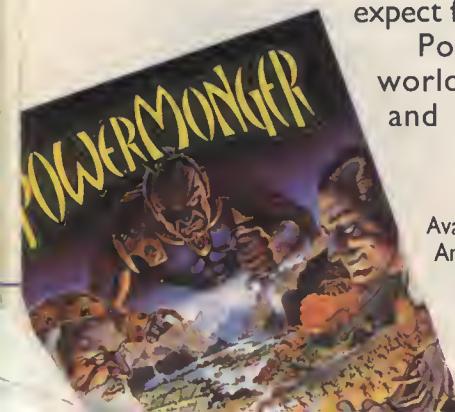
rain, where inventiveness and strategic skill can triumph over mere brute force.



Powermonger will test you to the limit, but don't just take our word for it, look at the ratings...

Ace...Ace rated 973, **CU Amiga...Super Star** 95%, **C & VG...C & VG** Hit 95%,

The One...95%, Zero Hero...93%, Generation 4...97%, Tilt...95%.



Available on IBM/PC,
Amiga and Atari ST.



BULLFROG
PRODUCTIONS LTD

ELECTRONIC ARTS

Electronic Arts, Langley Business Centre, 11-49 Station Road
Langley, Berks SL3 8YN, Tel: 0753 549442, Fax: 0753 54667

News

AMSTRAD LOOKS TO HIGHER POWER



Having broken into the leisure PC business with the launch of last year's PC5286 Games Pack, Amstrad is now aiming to interest the more serious home user with the announcement of a similar bundle built around faster 386-based hardware and retailing for under £1,000. This follows the one widespread criticism of the Games Pack: that it was based around a 286 machine.

Appearing with the snappy title of the Amstrad PC4386SX Family Pack, the single-carton bundle includes a 386SX system unit running at 20MHz and equipped with a fast access 80Mb hard drive, a 4Mb of RAM, a 10-inch Sony Trinitron VGA colour monitor, two-button mouse, joystick, AdLib-compatible sound card (with stereo speakers) and a range of business and games software.

Amstrad's group sales and marketing director, Malcolm Miller, explained why the firm felt that the home user would benefit from the new bundle's extra computing power: "The end user needs as many

computing options as possible for his money, so we are following the success of the PC5286 Games Pack with an even more powerful small footprint machine. It is a fast and powerful package, while the ultra high resolution VGA display far exceeds the capabilities of dedicated games machines and is also right up to the mark when it comes to dealing with today's advanced business graphics."

Software bundled with the package consists of Broderbund's classic animated action adventure, Prince Of Persia, Access' 3D golf simulator Links, MicroProse's still-impressive (if a little long on tooth) all-action flight simulator F-15 Strike Eagle II, MS-Dos 3.3, Windows v3.0, a customised version of the Microsoft's Excel spreadsheet, Counterpoint (a graphical interface) and Amstrad's own front end software, Manager.

The package is available now from usual Amstrad stockists, priced at £999.99 (inclusive of VAT). Further details are available from Amstrad on (0277) 228888.

GOLF GETS 386 POWER

Golf enthusiasts equipped with a 386 machine or better can now make the most of their sophisticated machinery with Links 386 Pro from Access software.

Written in 32-bit code and utilising Super VGA throughout, Links 386 Pro gives the user the potential to manipulate more than 345 viewing windows,

allowing the game to be almost completely customised to the user's taste.

This latest golf sim also claims to make full use of any extended memory - the game will run on any machine with 2Mb, but will make full use of any extensions up to 8Mb.

Other enhancements over the original Links game include a

shot save facility, on-line tournaments, male and female players, zoomable top view and multiple play modes.

Links 386 will be on the first tee by early July. No details of price have been announced as yet, but this information and more can be had from Access' UK distributor US Gold on (021) 625 3366.

MAKING THE HEADLINES

Hardware

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ORIGIN CLUES UP



Origin is coming to the aid of its games' less expert enthusiasts with the release of the latest in its series of clue books, designed to aid progress not only in its own latest releases but also to others by a number of other publishers too.

Written in the style of game character Baron Almric's archivist, Joye, *Mysteries Of The Abyss* contains 64 illustrated pages of clues and hints for *Ultima Underworld*. Everything is explained, from the location of runestones through the complexities of combat and bartering – even the mysterious Lizardman language is demystified.

Not only does the book deliver a complete 'walkthrough' for the user, it also explains a good deal of the game's background – including how the Abyss became the breeding ground of evil intrigue that it is today.

Another narrator takes over to guide the hapless adventurer through *Ultima VII* in *Key To The Black Gate*. Here, Anton (apprentice to the mage Alagner) devotes his 64 pages to explaining many facets of the land of Britannia, from descriptions of weapons and spells to detailed maps and stats. The book also details two separate walkthroughs, one containing hints and advice from the Wisps and the other using detailed answers from the Time Lord.

While both of the books mentioned so far cater for single Origin games only, the fifth in the *Quest For Clues* series offers tips and solutions to 20 games from a variety of publishers. Not only that, but *Quest For Clues: The Book Of Orbs* also details such information as system requirements and summarises and reviews each game into the bargain.

Games covered include SSI's *Buck Rogers Matrix Cubed*, Delphine's *Cruise For A Corpse*, Sierra's *Leisure Suit Larry V*, Empire's *Megatraveller 2* from and *The Secret Of Monkey Island 2* from Lucasfilm. The *Book Of Orbs* is priced at £9.99, while the two Origin-specific titles will each set you back a quid less. All are available through most major chains and software suppliers.

Like the Origin games themselves, the clue books are distributed in Britain by Mindscape, which is adding to the ever-growing library of helpful literature for stranded gamers with the publication of its own volume, the *Knightmare Adventurer's Handbook*.

Written by David Amor (with a little help from the game's author Tony Crowther), the KAH will help players to complete all four of the game's quests. However, rather than making things too simple, the book has taken a lead from the game which inspired it by mixing the clues out of sequence and encrypting them in a special code.

The Handbook is priced at £5.99 and is available from the same sources as the Origin range. Further information on all of the above titles can be found on (0444) 246333.

AD LIB CALLS IN THE RECEIVER

Sound specialist Ad Lib sent a shock through the world of PC gaming on May 1st, when instead of shipping out the first units of its long-awaited Gold Card it instead announced that it had called in the receiver.

Details of the exact reasons for this situation are still unclear, but it's believed that the massive research and development costs of the Gold Card contributed heavily to the Canadian firm's debt.

A number of other firms are said to be interested in taking over the troubled company, so it's unlikely that production and distribution of the popular range of sound cards will be interrupted for long.

Phil Harrison, software development manager of Ad Lib's recently appointed UK distributor Mindscape, was taken by surprise by the sudden closure – he was actually calling Ad Lib to confirm apparently healthy orders for the new Gold Card when he heard the news. However, he feels confident that the Gold Card will eventually appear, despite the manufacturer's troubles: "When a company has invested as much as Ad Lib has in research and development of a new product, it's not likely that it would be simply allowed to disappear. It's safe to assume that a card with the Ad Lib Gold specifications will appear in the near future whether it's called the Gold Card or not is another question."

At Ad Lib's Canadian headquarters, a spokeswoman was confident that its products would become available again shortly. "I wish I could tell you more right now, but there are people interested in the company."

Whether Ad Lib is eventually rescued or not, it's likely that 'Ad Lib standard' code will continue to be written into games software for the foreseeable future – not only to cater for the demands of existing users, but also to service the numerous third party cards which adhere to the standard.

More news on this situation in next month's issue.

● Prizewinners in the Ad Lib Answers competition should have been notified about the availability of prizes. Most have been despatched, but, if you are a winner, and haven't heard from us, get in touch using the phone number at the front of the magazine.

GAMES DRIVE YOU MAD

Stop right there – unplug your joystick, remove your sound card and get back to boring spreadsheets, because the latest batch of research results just in from Japan prove conclusively that playing computer games are bad for you.

The survey, which was carried out with the parents of 1,917 boys and 1,951 girls, pointed to increased aggression and energy in those who indulged in computer gaming.

Strangely though, these results only appeared in younger children, with the trends reversing as the age groups rose.

So, maybe it's all right to carry on as you were then – sorry about the panic.

IN BRIEF

NEW LABEL TOUCHES DOWN

● Basildon-based Entertainment

International, the company behind the Empire and Readysoft labels, has joined the budget games business with the launch of a new label, Touchdown.

The label will carry a mixture of old EI titles and games sourced from other publishers. An exact launch date has yet to be set, but

the initial line up has been confirmed as *Better Dead Than Alien*, *Gazza 2*, *Pipemania* and *Sleeping Gods Lie*.

Following this initial crop, the firm plans to release two titles a month on Touchdown, all priced at £9.99. For further information, call Entertainment International on (0628) 541126.

KEY TO CLEANER COMPUTING

● Read Cosine is spearheading the charge towards kitchen table computing with the release of its new 'wipe-clean' Scorpion range of replacement keyboards.

Offering all of the usual

COOLER THAN
AN ICEBERG IN
ANTARCTICA

PC WORLD

THE COMPUTER SUPERSTORE

BRAVE NEW WORLD

Essex man and woman can now enjoy the benefits of one-stop shopping as the PC World chain, which featured in the guide to buying a PC in our January issue, has chosen the Lakeside Retail Park in Thurrock as the location for its second store, and not Brent Cross as was previously announced.

The store, which will open later this month and feature

the same mix of hardware and software as its Croydon namesake, is situated alongside Toys 'R' Us and Do It All, covers 31,000 square feet and has access to 1,000 car parking spaces.

There are no firm details of the location of further PC World stores, although it's likely that Brent Cross in North London could be the site for store three. More details from Vision Technology on (081) 760 9727.

FUJITSU CLAIMS COMPUTER FILM FIRST

With computer technology now adding a new dimension to the special effects in the latest blockbusters, including Terminator 2 and the forthcoming Lawnmower Man, Fujitsu has gone one step further by releasing the first ever completely computer-generated film.

Echoes Of The Sun, a 20-minute documentary on the journey of a particle of light from the moment it leaves the sun until it finally transforms into human energy, is exhibited in an all-new 'wraparound' format, with an extra dimension added by the use of LCD glasses.

The film was produced on three Fujitsu supercomputers and eight workstations, running more than 100 separate software programs to generate the images at a cost of roughly £17 million.

The six-month Expo '92 exhibition which opened in Seville in late April is currently playing host to the film, which will tour the world's major universities and science foundations later this year.



functions and capabilities, including AT, XT and PS2 compatibility, the Scorpion's 95 keys are of the sealed membrane variety, ideal for use in those messy areas around the house.

Further details, including information on the impact guards and finger location plates, are available from (0202) 632274.

PHILIPS LAUNCHES NEW MONITOR

Philips has added to its Brilliance monitor range with a multistandard 17" colour model, supporting resolutions up to 1280 x 1024.

The Brilliance 1709 will cost £1,299 - details from Philips on (081) 689 4444.

HOTTER THAN
A PICNIC IN
DEATH VALLEY



THE TOTALLY
COOL
EXPERIENCE OF A
LIFETIME!

IT'S
CROCTASTIC!!

JOIN PUNK &
FUNK CROC ON
THE COOLEST
WORLD TOUR
EVER!



MAXIS GOES TO MINDSCAPE

In the biggest transfer sensation since Lazio signed Paul Gascoigne, Maxis has left the Ocean fold to become the latest in the ever-expanding portfolio of Mindscape's European affiliates.

With such notable successes as Sim City, SimEarth and Sim Ant under its belt, Maxis is a real feather in Mindscape's cap, as European boss Geoff Heath readily admits. "I am delighted to have come to an agreement with Maxis to distribute their product in Europe, as I believe the profiles of our companies complement each other perfectly," he said.

The deal will bear its first fruit later this month with the release of two new products – one an update of a Maxis classic and the other a completely new program.

Sim City for Windows is just that, a specially enhanced version of the acclaimed urban simulator for Microsoft's popular graphical interface. Most

importantly, the game will now support high resolution VGA graphics and offer full multitasking, so that the city can build in the background while other programs are running.

The second release, A Train, once again concentrates the player's mind on developing a major urban centre, but this time with a railroad as the transportation hub.

The game contains six separate scenarios in total, each of which provides building supplies, cash and a field of play. The object is simply to build as efficient a city as possible and become a wealthy man in the process.

In graphic terms, the simulation cycles through day and night, while the train's movement itself is viewed in a separate animated window.

Both games will retail at £44.95 and should be reaching the shops as you read this. Congratulations on the new partnership can be delivered to Mindscape on (0442) 246333.

ROLL YOUR OWN

If you fancy designing and building your own PC next time around, then Inside The Grey Box – Choosing, Building and Upgrading a PC by Dr P D Croker could be just the most important £14.95 you spend.

Published by the I/O Press, this 258-page volume details Dr. Croker's own personal experience of building and upgrading IBM-compatible computers and provides practical insights into every aspect of the machine – from motherboards and memory to disk drives and video cards.

The book also claims to be useful for those who already have a machine and want to bring it up to current standards. Further details are available from I/O Press on (0969) 24402.

GIVE YOUR PC CD-ROM POWER

Sony has become the latest hardware manufacturer to join the multimedia market with the launch of its Laser Library system, which it claims will turn just about any PC into a multimedia education and information centre.

A complete hardware and software combination, the Laser Library is designed to be installed by any user regardless of technical knowledge – there's even a screwdriver included with the package.

The package also includes six CD-ROM titles – including The Software Toolworks' World Atlas and Compton's Family Encyclopedia – and Sony claims that there are a further 2,500 titles currently available.

In technical terms, all that's required of the prospective user's system is that it has at least 512K of RAM, 3.5Mb of free hard disk space, VGA graphics and MS-DOS version 3.1 or later. A mouse is recommended as the system's software utilises a Windows style interface.

This system represents the first that Sony has produced under its own brand name, despite an eight-year track record in CD-ROM development. According to Sony's divisional manager, Phil Molyneux, this is because: "The branding of the Laser Library is a measure of Sony's confidence in the product, and in the level of quality and support that users can expect."

The Laser Library is available now through specialist computer dealers, priced at £499. Further information from Sony on (0784) 466660.

enormously popular Fun School

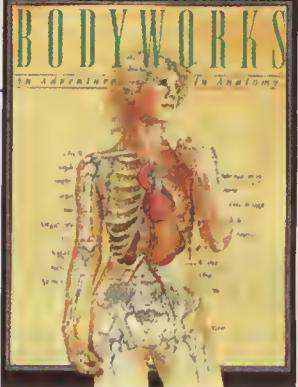
series is scheduled to make a fifth appearance – but not until 1993 at the earliest.

The reason for the delay is that the firm plans to rest the series for a while to concentrate instead on three Fun School branded subject-specific products instead: Spelling, Maths and Paint

and Create.

When it does eventually appear, Fun School V will come in the usual varieties concentrating on three separate age groups: under fives, fives to sevens and sevens to elevens.

Europress Software can be contacted for more details on (0265) 859333.



MIND AND MATTER

Two new software releases from PC Connections (available on (0706) 222988) allow you to explore either your own body or the entire universe – without leaving your chair or buying a stethoscope.

Bodyworks – An Adventure in Anatomy is an illustrated database which allows the user to study specific areas of the human anatomy in graphic detail.

All the major elements are covered – skeletal, muscular, nervous, digestive, cardiovascular and reproductive – and the program even includes a health reference section which contains information on first aid, general fitness, sports injuries and also common illnesses.

Orbits, on the other hand, leaves behind all things physical to explore the celestial void. Once again an illustrated database, the program takes the user on a journey through the solar system making use of the latest satellite photography available along the way.

Both programs are available now – Bodyworks is priced at £48.99 and Orbits at £37.99.

IN BRIEF

SCHOOL'S OUT

Europress Software's

FINAL CHAPTER FOR WING COMMANDER

Fans of Origin's Wing Commander saga can get their teeth into 20 new missions in Special Operations 2, the final disk for the award-winning

TWO MORE FOR SSI

Stategy specialist Strategic Simulations Inc has announced two new games with remarkably differing scenarios.

Conflict: Korea is a operational wargame based on the US Army's ill-fated South-East Asian conflict in the 1950s. Designed for use by either one or two players on PC with at least a CGA card, the game is divided into three scenarios: The Dragon Wakes (June 1950 to June 1951), Operation Chromite (September 1950 to June 1951) and Cold Steel (November 1950 to June 1951).

There is also a fourth, hypothetical scenario which depicts a renewed outbreak of conflict in 1990, based on the assumption that the US is also

engaged in other conflicts and therefore has limited resources.

The second game, Midnight Sons, uses SSI's new graphics based role-playing system to tell the tale of an undercover team who travel to the distant planet of Monsoon to free a group of kidnapped diplomats.

This mission, which takes place in glorious 256-colour VGA, involves the player controlling four characters and one robot in an attempt to wrest the whole planet from its captors.

Midnight Sons will be available in July (no price has been specified as yet), while Conflict: Korea is out now, priced at £34.99. More news from SSI's UK distributor US Gold on (021) 625 3366.

STAND UP CHRISTIAN CODERS

The devil may have all of the best music, but computer software will be going to the other side if Evangelsoft's new range of bible study programs takes off.

The first, Israel Then And Now, is a mine of information on the Holy Land, both historical and modern, which supports two add-on modules: Wish You Were Here (a quiz, based upon 10 eight-day holidays in the area) and You Are Invited To Attend (which recreates the biblical events of Easter).

Those who crave a little more adventure might prefer to get stuck into the arcade action of King Solomon's Mines. The standard gameplay, which involves mining for copper and gold in a hazard-filled mine, is supplemented by answering biblical questions (get these right and you increase your store of treasure in heaven!).

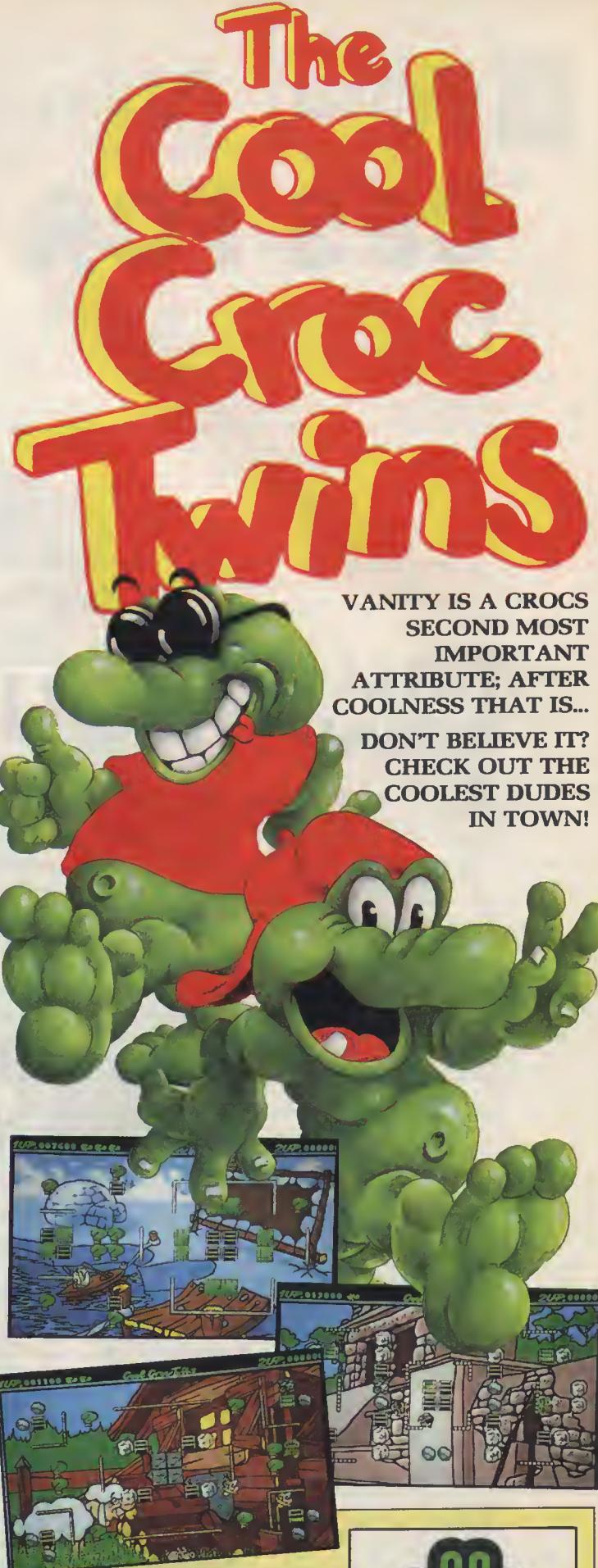
Evangelsoft games are developed by a team of 16 voluntary programmers working for EvangelTrust, a registered charity committed to the creation of Christian computer games. The trust can be contacted by writing to PO Box 224, Kingston Upon Thames, Surrey KT1 2NX.


Vengeance Of The Kilrathi, SO2 puts the pilot at the helm of an untested superfighter and offers a number of enhancements over its predecessors, including tactical nuclear weapons.

Special Operations 2 is out now, priced at £19.99. Further information from Origin's UK distributor Mindscape on (0444)

epic.

Designed to run in conjunction with Wing Commander II: The



VANITY IS A CROCS SECOND MOST IMPORTANT ATTRIBUTE; AFTER COOLNESS THAT IS...
DON'T BELIEVE IT? CHECK OUT THE COOLEST DUDES IN TOWN!

ARCADE MASTERS

CES FOR LONDON?

London could join Las Vegas and Chicago as host to a huge annual Consumer Electronics Show, as the exhibition arm of Rupert Murdoch's newspaper giant News International is currently drawing up plans to stage such an event in the latter half of 1993.

The show's project controller, Loretta Sales, expects the show to cover all aspects of electronics, including computers, television, video, hi-fi, electronic music, telecommunications, home business, radio, broadcasting, satellite, cable and photography.

"We feel that there is a need for a public show of this type in Europe," she said. "And although there is nothing signed or confirmed as yet, we have spoken to most of the major electronics manufacturers and the interest is definitely there."

Should the show go ahead – and it now seems more than likely that it will – the Olympia complex is a likely venue, while both September and November of next year are currently being considered as possible dates.



TOTAL SOUND

AdLib's future may be in some doubt, but clones of its popular sound card just keep on coming. Two more have been announced this month, the first of which is the Sound Commander FX from Total Memory and Media, which also includes Sound Blaster and Covox Speech Thing compatibility in its armoury.

The card comes in two versions, mono and stereo (priced at £110 and £145 respectively, with the mono version upgradable to stereo), both equipped with a pair of stereo speakers. Constructed around Yamaha FM synthesiser chips, the card has a built-in MIDI interface and can store and update digitised instruments through its programmable 8K RAM buffer.

Bundled software includes CD Studio, Soundtrack and Showpartner Lite (for compiling presentations and the like) as well as a number of family singalong favourites in a karaoke selection. The card's functions can also be accessed via a remote control, which costs a further £20 (all prices quoted are exclusive of VAT). Total Memory & Media can be sounded out on (0256) 880510.

A more conventional set-up is offered by Woking's Interconnections, whose audio system consists of a PC Symphony card and two stereo speakers. The sound card is AdLib-compatible and contains a built-in 4.5 watt amplifier.

Interconnections' model retails at £49.95 (also ex. VAT). Details of availability and so on can be found by calling (0483) 797418.

HOUSE OF FUN

Your local amusement arcade may be about to lose its conventional image as a den of ill-repute, as Japanese-style video game theme parks are set to make an entry into Europe in the near future.

The parks – which are run in Japan by the major video game manufacturers including Sega, Namco and Taito – feature the usual arcade fare, alongside cabinet-housed driving games, big screen shooting games and even leading-edge virtual reality machines. They

are however different to existing European arcades in that they feature more expansive floor space, upmarket interiors and even fast food.

Sega Enterprises is expected to lead the push into Europe, and has already acquired London's Deith Leisure and WDK in Paris as part of its plans. Interested parties can preview these new theme parks by visiting Sega's 800 square metre display at Euro Disney.

MISCO GETS ORGANISED

Once again Misco Computer Supplies, the Ronco Products of the computer world, has come up trumps with the announcement of another catalogue of 'how did we ever live without them?' computer accessories.

Best of the bunch this month is the Virgin Microfile (below) – a 3.5" disk storage box which can hold up to 20 disks, and deliver them to the user by dialling a number and pressing a button!

The Microfile is complemented by a complete range of Virgin disks (of all densities and sizes) available in either standard finish or five pastel colours. Misco is currently offering a special promotion on the Microfile where customers purchasing the unit and a box of 10 disks (retailing at £39.85) receive a further box of 10 free of charge.

Further information is available from Misco Computer Supplies on (0933) 400000.



GRAND PRIX SET FOR SEPTEMBER

The eagerly awaited racing game from Geoff Crammond, Formula One Grand Prix, is now due for release in September. Crammond's track record in this field is impressive – he also programmed the BBC classic Revs in the mid-eighties, and more recently, Stunt Car Racer Grand Prix features cars from the 1991 Formula One teams, racing on all 16 official circuits.

Formula One Grand Prix will cost £34.99 and be published by MicroProse, which has also been talking about other titles in its autumn line-up.

Haunted is the working title of a 3D role playing game being written for MicroProse by Magnetic Scrolls (of Wonderland fame), while MicroProse is also getting into the war game area with Napoleon, detailing events following Napoleon's return from exile on Elba. Full details of these two have yet to be released.

MAGIC POCKETS

THE BITMAP BROTHERS



They've nicked his bike.
They've whipped his helmet.
This time they've gone too damn far...

NO ONE MESSES WITH THE BITMAP KID

features:

stacks of levels • heaps of weapons • swarms of intelligent nasties
bonus games • secret rooms • loads and loads of power-ups



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© 1991 The Bitmap Brothers. Published by Renegade



Buzz Aldrin's Race



Title: Buzz Aldrin's Race into Space
Development: Fritz Bonner/Interplay
Genre: Strategy simulation
Publisher: Electronic Arts
(0753 549442)

Release date: August
Price: £39.99

PC version of board game Liftoff, chronicling the early days of space exploration

Probably the most surprising addition to the latest batch of space titles (Shuttle, Star Trek, et al) is Interplay's 'Buzz Aldrin's Race into Space' (BA). Another surprise is the background of the game's designer. Fritz Bonner is an actor with around 175 commercials to his name, appearances in Miami Vice, Beauty and the Beast and General Hospital. Fritz himself has a high interest in cosmic adventure. "I worked at the Space Transit Planetarium which cultivated my interest. From there, I went to the United States Air Force Academy with [the] goal of being an astronaut. Unfortunately, financial cutbacks were made in my area of interest and I resigned from the Academy and became an actor. The flying was great though."

Because the computer game has been based upon a board game called Liftoff! the amount and depth of research for the computer game has become quite substantial. As Fritz says, the cost runs into "... several thousand dollars in books, videos, tapes and phone calls with all sorts of

Using digitised footage from NASA, Buzz Aldrin closely follows the United States real-life space race.

experts: from the Department of Defense, to NASA, to the CIA field experts on the Soviet space programme — all of which was accumulated over 10 years."

Buzz Aldrin is, essentially, a strategy-based game. The gameplay covers 1957 to 1976, from the early exploration of space to the man on the moon project. You can choose to control either the American or Soviet space programs. There are two levels of play pertaining to the country you choose. In the beginners' game, both sides start equal. In the advanced game there are historical advantages for the more powerful rockets for the Soviets and with technology for the Americans.

During play, you begin with a spaceport, 'The Cape' (in the USA) or 'Baikonur' (in the old USSR). Initially your centre is a very small facility with a couple of buildings and one launch facility. As your budget increases and you start various programs buildings are added and others increase in size (buildings are entered to access game functions). An example is offered by Fritz. "If there is a

launch that is scheduled this season, after purchasing additional hardware in the Administration Building, you would probably continue to research and develop it in the R&D complex, then go to the Vostok Training Facility to check on the crew. After going to a couple of other buildings, it's time to assemble the rocket and payload in the Vehicle Assembly Building. After that you send it to the launch tower and you go to the Mission Control Room where you run the mission."

Astronauts, you can control all 140 of them, can undergo training programs. Each astronaut and cosmonaut has skills, although only a couple are shown at recruiting. In addition, in each game the skills are slightly varied and 5% have hidden skills. The new recruits go into an 18 month training school. Then, finally, their full skill lists are displayed to the player by the game's analysts and psychologists. After the training period the astronauts are assigned capsule programs and as crews. The players get reports on compatibility with crew mates and their enthusiasm with how you are running the space programme. If astronauts are not in capsule programmes they could be in advance training to improve their skills.

There are 88 set missions at the moment, but, because you can vary the hardware set-ups, there is a potential of hundreds of different missions. One example is offered by Fritz. "Placing a Gemini or Mercury [rocket] in orbit are [can total] 20 different missions. As for landing a man on the moon, there are 20 different ways."

The essence of the game involves a variety of tactical and strategic decisions as Fritz describes, "You

decide what your goals are. Do you follow history and launch several satellites or are you more aggressive and want to send men into space as soon as possible? What type of programs do you want to develop as you establish your goals? Do you follow historical steps or do you follow 'proposed' programs such as the Nova rocket or the Mini-Shuttle or the one man Lunar Module? How well you succeed in the early exploration of space effects the outcome of the final goal of landing men on the Moon and returning safely to earth."

Because of the ability to vary your programming decisions you can change the course of history: the first man and woman in space, the first space walk, the first satellite, space walk, man on the Moon — all of these events can be manipulated in the game.

"As for man on Mars," quipped Fritz, "well, that's for the next game of course!"

The presentation to BA will "... be very visual with digitised graphics, VGA only to begin with, and sound," said Fritz. "The digitised graphics are all from photos, film and video footage



PRESIDENTIAL REVIEW CONTINUE

FALL 1961

THE PRESIDENT QUESTIONS SOME GUIDELINES, AND STRONGLY URGES A CHANGEOVER IN PRIORITIES. HE IS CONCERNED WITH THE FAILURE TO MEET GOALS AND IS GOING TO EVALUATE YOUR STRATEGY.



into Space

"HE WALKED ON THE MOON"

"Lunar gravity was so springy that coming down the ladder [of the Lunar Module] was both pleasant and tricky. I took a practice run at getting back up to that high first step, then hopped down beside Neil [Armstrong].

"Isn't that something?" Neil asked. 'Magnificent sight out here.'

"I turned around and looked out at a horizon that dropped steeply away in all directions. Off to the left I could make out the rim of a large crater. I breathed deeply, goose flesh covering my neck and face. 'Beautiful, beautiful,' I said. 'Magnificent desolation.'

"We were both in the sun again, our helmets close together. Neil leaned toward me and clapped his gloved hand on my shoulder. 'Isn't it fun?' he said.

"I was grinning ear to ear, even though the gold visor hid my face. Neil and I were standing together on the MOON."

The above is an excerpt from Buzz Aldrin's co-written book (with Malcolm McConnell) about his story

leading up to the first moon landing and its aftermath.

However, even though the moon landing was a notable historical event people do forget ... or lose the perception of what the event meant to mankind in general. Buzz, recounted the following story: "Recently, I was in the visitor's building of the Johnson Space Centre in Houston where there's a lunar module on display. A young couple strolled up with their two kids, a girl around four and a boy a few years older.

"What's that Dad?" the boy asked pointing at the strange machine pointing at the strange machine perched like a gold and black cement mixer on four gangly legs.

"The father frowned, unsure of himself. They hadn't seen the explanation panel. 'I think it goes up on the shuttle Jason,' he finally replied.

"I decided to tell the story of Apollo so that future generations will have an understanding of the historical events and the chance to share the experience of what has been called humanity's greatest adventure."

from the DOD, NASA and various agencies. They were either 'frame grabbed' or retouched or drawn from photos."

The final game should be on the shelves around September but the package will include at least eight high density disks (Wing Commander 2 only had seven!) and a 200 page manual.

Mission control in all its glory.



B-17 Flying Fortress



"I'll never forget my first time.
I was eighteen years old and still
wet behind the ears.
She guided me gently through all those
fraught, nervous days. Proud, haughty
and oblivious to all danger."

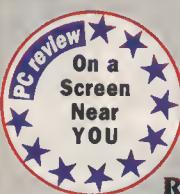
B-17. It's a flying experience
you'll never forget.

B-17 FLYING FORTRESS

Released first on IBM PC
Compatibles, followed by
Commodore Amiga
and Atari ST.

MicroProse Ltd. Unit 1
Hampton Road Industrial
Estate, Tetbury, Glos. GL8
8LD. UK. Tel 0666 504 326.

MICROPROSE
SIMULATION • SOFTWARE



Title: Flag
Developer: Envision
Softography: N/A
Genre: Strategy
Publisher: Gremlin
Release date:
November/December
Price: £TBA

Paintball meets fantasy in a two-player strategy game.

Flag takes you back to the times of wizards and all that jazz. Picture a planet inhabited by wizards where the game of Flag is used to settle all differences using two zombie armies to do all of their fighting for them. You play an evil wizard who decides that he wants to take over the entire planet. To do so you are using your right to call the other wizards to play you in a game of Flag. Canny, eh?

There are 10 opponents but you must beat them four times to win, which makes 40 levels but there are extra levels for special occasions. If you beat the 10 opponents the planet is yours.

"The game itself is a bit like Paintball in as much that the objective is that, simply, one of your men has to touch the enemy flag and vice versa, the flag can be placed anywhere you like. Putting it in your stockade might be a good idea. To make things more difficult you and your opponent can build walls anywhere you like — to protect the flag or to make it difficult for the enemy to cross a bridge or whatever," said Envision programmer Ian Harling.

Flag is presented in full screen isometric 3D and offers multi-

FLAG

directional scrolling. You start out with no players on the board. They are all created or 'bought' using limited gold reserves at the start. Soldiers are the basic unit, cannon fodder used just for fighting with basic spears. You also have other units such as bombardiers who can blow up walls, ninjas (handy for destroying buildings) and the dragon who will fry soldiers.

Then you've got magic on top of that. Spells available include things like 'plague'. If you give one of your soldiers a plague spell you can send him out amongst the enemy and he will transfer a plague from person to person and, one by one, the enemy die. Other spells include extra strength, extra speed, and so on. In amongst all of this is the importance of certain buildings (which provide gold, soldiers and so on) within the stockade such as the treasury, the barracks and the merchant's house.

Graphically, the game changes as you progress. The initial levels begin as a medieval scenario and slowly progresses to more Elizabethan era. This means that your equipment may change. The stockade may diminish in stature, for example.

A river divides the two stockades. Normally soldiers will use the bridge to cross the river but if you've blocked off the bridge then they'll wade through the water. However, they will also lose a bit of their strength. Soldiers lose strength during a successful combat, too, but that is slowly regained.

"The joy of Flag is the control system because we have got a 'tagging multi-system', issuing multiple commands. I can order a soldier (up to five soldiers) to come out of the barracks, move right up to the north end of the play area where nobody is going to see him, then walk right down again behind the other person's barracks, attack two guards and then go into the stockade and capture the flag. You can also issue patrols which the soldiers will endlessly follow," said Harling.

The commands are issued by a simple series of icons accessed without having to go back and forwards through menus. All commands are instantaneous and movement is real time. Which can get quite hectic with up to 50 soldiers on each side on-screen at one time.

"This sounds like we are trying to create gameplay by rushing the player," commented Harling. "That is not the case. You do have a mini-map, as in Populous which enable you to keep a tag on your men. The multitude of possible

strategies and the need to think ahead by several moves gives the game a 'chess' feel," enthused Harling.

Also, Envision say that you can link two machines up via the comms link, you can play a one or two player game on one machine. "We are also working on it so you can play through modems in real time. With a bit of luck we may be able to rig up four or five different stockades if you can link up enough PCs. If you can link up a modem too it would make a nice game for a network like CIX," mused Harling.

The PC version will use 256 colour VGA graphics with Roland and Adlib soundcards. Soundblaster digitised sounds will, hopefully, be there with speech appearing at specific times. The game should appear this autumn.



Flag's isometric viewpoint offers a new dimension to the strategy aspect while the graphics vary depending on what stage of development you've reached, starting with basic wooden huts and progressing to stonework and beyond.



The intro sequence sets the scene for this battle of the wizards with stunning 256-colour graphics.

Darklands™

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In Medieval Germany, reality is more horrifying than fantasy

Deep in the twilight of the Black Forest, you and your companions crouch before the robber-knight's tower. Hans the alchemist, places a mysterious potion by the heavy oak door. Ebhard the monk implores Saint Dunstan to bless your weapons and armour. Gretchen and you unsheathe your broadswords ready to jump into the fray.

With a thundering crash, the door explodes into fragments. You and your companions charge inside swinging swords and maces from side to side.

Gerhard the Red Wolf, the infamous robber knight waits for you surrounded by his evil henchmen. They are ready with weapons drawn. Suddenly, Hans tosses a choking potion into their faces, they reel from the effect and in that precious moment you race into them. The lonely tower, set deep within the vast Black Forest, echoes with the sound of clashing steel.

Darklands. The first realistic fantasy role-playing game. By leading a band of adventurers across the sinister lands of 15th

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MICROPROSE

Darklands is available for IBM PC compatibles.

Look for the box in all good software stores or telephone now for your free MicroProse Catalogue. 0666 504 326.



Title: Laura Bow 2: The Dagger of Amon Ra
Publisher: Sierra
Genre: Graphic Adventure
Programming Team: Sierra
Release Date: Early June
Price: £39.99

Softography: (Roberta Williams) The King's Quest series, The Colonel's Bequest, Mixed-up Mother Goose

Agatha Christie style adventure from the King's Quest stable



Laura Bow 2: The Dagger of Amon Ra

After a game has been out for a while, we do a survey asking the players how well they liked it, if they would buy a sequel and other

questions along those lines. On the question of would you buy the sequel, *The Colonel's Bequest* had the highest affirmative rate of any of our games, even over *King's*

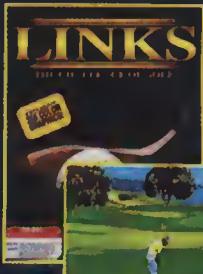
Quest. It was something like 90-95%."

Even a minor hit for Sierra puts most our home-grown successes to shame. Roberta Williams herself

would be the first to admit that *The Colonel's Bequest* — the first game featuring the heroine Laura Bow — wasn't a massive hit either here or in the States, but the

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"It's graphics are the best yet...far superior to any other computer golf game." — Golf World

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So realistic

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LINKS
The Challenge of Golf

Firestone Country C

Akron, OH

retention rate of her audience is such that it warranted a sequel, one taking full advantage of the SCI interface and the updated graphics and sound capabilities. The Dagger of Amon Ra is the result of these surveys and is set to give the amateur sleuth her second taste of murder in the 20s.

This time round Laura has graduated from college and is working as a cub reporter for a local newspaper. Sent to investigate the theft of an ancient Egyptian dagger she winds up scouring New York for clues before attending a fund-raiser at the scene of the crime, the New York museum.

The Colonel's Bequest was novel for a Sierra game in that once you arrived at the mansion, the game was played in a series of eight acts, with all the action taking place in the same locations but events differed depending on which act you were in. "Once you get into the museum, that's pretty much the way it is here too. People will come and go, different murders may happen, people will have different conversations, objects may appear and disappear from rooms where they were before. There are some other parts of the museum that you can't get to during some of the acts."

One of the other differences in



The 1920s provides a backdrop rich in atmosphere and intrigue. Extensive research went into ensuring that the whole feel of the era was captured, from dress styles to flopper girls.

The Colonel's Bequest compared to most Sierra games was the amount of conversations that took place. But with the new text-free input system that Sierra has adopted, how can you question

suspects on where they were and what they know? "The interface in Laura Bow 2 is the same as the ones in King's Quest V and Space Quest IV; however we have a neat enhancement. We didn't know

how to ask about something when you don't have a parser and you can't type anything in, so what we came up with was the idea of her notebook. In The Colonel's Bequest we had the notebook in the box, intended for the player to write down notes as he went along. In this case the notebook is in the game and as Laura learns things we'll put it down in the notebook along with people's names and things like that. We've put another icon at the top of the screen, an Ask or Question icon. When you put the icon on somebody it'll take you to the notebook and you can flip pages, highlight something and ask about it."

The art of Laura Bow 2 takes full advantage of Sierra's improved graphic interface, using a mixture of rotoscoping for the sprites (whereby actors are filmed performing various manoeuvres and the film is digitised) and scanned artwork for the backdrops and close-up shots. Each scene is hand drawn (Pic A), inked and coloured (again by hand — Pic B) and finally transferred to the computer screen (Pic C).



A



B



C



Bountiful Golf Club
Bountiful, UT



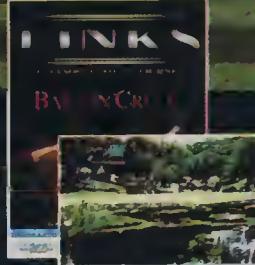
Bay Hill Club & Lodge
Orlando, FL



Pinehurst Country Club
Pinehurst, NC



Dorado Beach Resort
Puerto Rico



Barton Creek Country Club
Austin, TX

SPECIAL

There is one main obstacle standing between the PC user and an easy life. It's called DOS. But if all you want to do is to make DOS more accessible, a full-blown graphical interface such as Windows is not necessarily the best solution. Huw Collingbourne looks at a number of file management programs designed to give you easy control over your hard disk without making unreasonable demands on your hardware.

DOS TAMERS

The Program Director ● £49 ● PowerUp! (0252) 376000

The Program Director from PowerUp! is a menu program that lets you start up applications from a numbered list instead of entering commands at the DOS prompt. You can create a menu containing up to 16 entries. Normally there will be one entry for each application. However, you can also use an entry to start up a new menu containing another 16 entries.

Having added a program to a menu, you must then specify the commands needed to start that program. These might include commands to change the directory or 'echo' a message onto the screen. A typical set of commands might read something like the following

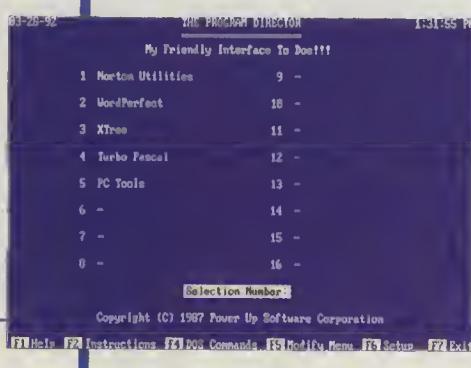
```
CD \WORD
ECHO Loading Word with the last document edited.
PAUSE
WORD MYDOC
```

Now, whenever the user selects the numbered option from the menu, all those commands will be executed and the Word program will be started up and the document, MyDoc, will be loaded into it. On quitting Word, the user is returned to the Program Director menu.

To prevent unauthorised users modifying the menu of selecting certain items, passwords can be assigned. This allows the person responsible for setting up the menu to exercise a moderate degree of control over the activities of other users.

This kind of menu system may be useful if you need to create a simple interface for inexperienced PC users. If you alone use your PC, however, you would do better to come to terms with DOS. With the exception of the password protection, most of the features of Program Director could be just as well performed by simple DOS batch files.

Power Up's Program Director is a simple menu system for people who hate the DOS prompt. But maybe it's too simple?



No matter how often or how fluently you use your PC's Disk Operating System (or DOS), it is difficult to like the PC's unhelpful operating system. Users of other types of computer such as the Amiga or Macintosh are provided with a graphical environment that makes it easy to perform most operations with a few clicks of the mouse button. On the PC, however, even before you can run a program or copy some files on to your disk you will need to get to grips with a whole load of commands entered at the infuriating DOS prompt.

These days the fashionable way to improve your PC's user-friendliness is to install Microsoft Windows. Windows has three principal benefits. First, it offers you a simpler interface to your computer hardware; second, it lets you use more than one program at a time; and third, it provides you with a set of pop-up 'desktop tools' such as a calculator and notepad. But for many users Windows is overkill. It

NORTON COMMANDER ● £99.95 ● Symantec (0628) 776343

The Norton Commander has most of the things I would hope to find in a competent file manager. It can display both a tree-map of directories and file listings. It can display formatted files created by many popular word processors, databases and graphics products. The file viewer does have a few problems, however. It cannot cope with very large graphics, for instance, and it imperfectly formats some other types of file.

The Norton Commander likes to give the impression that it isn't really replacing the DOS command line at all. It is enhancing it. It manages to create this impression by popping up its windows above the DOS prompt. If you want to enter commands to DOS, you can do it in the normal way. Or you can use the Commander's windows.

At first sight, this may appear to be fairly pointless. In fact, it can occasionally be faster to enter a command at the DOS prompt than to select a function from menus or windows.

One of the specialities of this program is its fairly high level of configurability. You place a window in only half the screen, with the DOS display visible in the remainder or you can expand a window to occupy the entire screen. If you wish, you can even remove the windows completely. Alternatively, different windows can be shown in the left and right halves of the screen - a tree-map on the left perhaps, and a file listing on the right. Common file operations such as copying and deleting can be done using either the keyboard or the mouse.

The Norton Commander has a menu program built in. You simply name the menu items and enter the commands you wish to run when that item is selected.

GEOWORKS PRO ● £149 ● Riva (0420) 22666

If you'd like to use Microsoft Windows but lack the hardware to support it, you may be interested to take a look at an alternative graphical interface called GeoWorks. This looks and works a lot like Windows. However, unlike Windows, it can be used on relatively low-power hardware. All you need is a PC based on an 8086 processor or better, plus a hard disk, at least 512K of memory and a CGA graphics screen.

GeoWorks Pro comes with a very strong set of integrated utilities. These include the obligatory card-index database, calendar and calculator plus a file manager and communications program. In addition to this, there is also a moderately powerful word processor, a drawing program and a cut-down version of Borland's Quattro spreadsheet. With the exception of the spreadsheet, which is not a dedicated GeoWorks application, all the programs can be loaded into their own windows and data can easily be copied from one program to another.

In theory, third-party developers can write programs to take full advantage of the GeoWorks environment in the same way they can write programs to take advantage of Windows. In practice, however, software developers seem to have better things to do with their time. For all its merits, GeoWorks is a non-standard environment which will never challenge the domination of Windows. You would have to search hard to find any third-party GeoWorks applications.

takes up a lot of disk space and, unless you are using top-range hardware, it runs rather slowly too.

In fact, on some PCs Windows won't run at all. You need to have a minimum of a 286-based PC with a hard disk even to load it. And Windows only really makes sense on a PC with a 386SX processor or

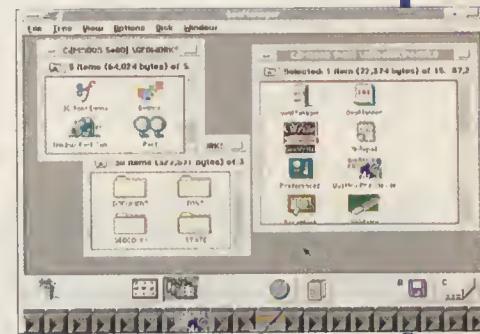
better with a few megabytes of extra memory and a VGA screen.

If all you want to do is to make DOS more accessible, Windows is not necessarily the best solution. There are a number of other programs that can give you a comparable range of utilities and better control over your disk without making so many

You can run standard DOS programs from within GeoWorks but this doesn't gain you much. What happens is that GeoWorks shuts down before the selected DOS program is run and then it starts up again when you quit the DOS program. The situation is a bit better if you are using Digital Research's DR DOS 6 instead of the more widely-used MS DOS. DR DOS 6 includes a 'task switching' utility that lets GeoWorks load up other programs without shutting itself down. Even so, if you are looking for efficient multi-tasking, GeoWorks is not the program you are after.

In short, GeoWorks is fine if you want a friendly 'front end' to use on low-power hardware. Its suite of built-in applications certainly surpasses those that come as standard with Windows. However, because it is so poorly supported by software developers, GeoWorks doesn't really cut the ice as a graphical interface. And because its environment is so all-dominating, it can't be recommended as a suite of DOS tools either.

GeoWorks provides a Windows-like environment for PCs that can't run Windows.



demands on your hardware.

Taking control of your disk may sound boring but it is essential if you are to live on equitable terms with your PC. If you just left everything to DOS, your files and directories would quickly become a disordered mess.

Every DOS disk has at least one 'top

PC TOOLS 7.0 ● £163 ● Central Point (081) 848 1414

There is so much in PC Tools 7 it's difficult to know where to begin. It has a disk manager that's a bit like XTree and a set of popup utilities that are a lot like Sidekick 2. In addition, it also has a large range of technical disk doctoring tools to rival a package such as the Norton Utilities. It even has a capable backup program that can save compressed copies of your files on to a series of floppy disks.

While its file manager, PCShell, is not as good as XTree Gold, it comes pretty close. It uses a similar style of tree-structured directory map with lists of files shown in a window alongside. It can display many types of file in an approximation of their correct format.

The most annoying thing about PCShell is that it does not display directories in alphabetical order. The order in which it displays the directories may make some sense to DOS, but it looks fairly random to the user.

The PC Tools equivalent of Sidekick is called Desktop. It includes a notepad, a diary, a card index database and even an outlining tool that lets you structure notes beneath a hierarchy of headings. There is also a simple communications program and no less than four calculators.

My main criticism is that the program uses a strange set of keystrokes. Most simple text editors use a subset of the keystrokes from the WordStar word processor. The Desktop goes its own way, however. I still haven't found which keystrokes are needed to delete a word in the notepad, if indeed this can be done at all.

Almost everything in the PC Tools package can be bettered by other programs. On the other hand, PC Tools does pack in a huge range of utilities. I've only scraped the surface here.

The individual tools may not be the best of their type but, when you put them all together, PC Tools is just about the best value software collection you'll find.



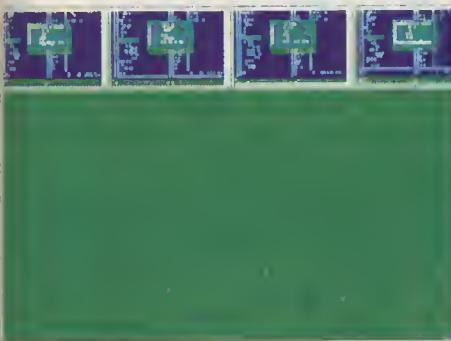
PC Tools 7 has something for everyone. The file manager shown here is just one of a huge collection of utilities.

There is a range of other useful tools in this program too. You can search for a file by name throughout all the directories on a disk, you can launch a document by instructing the Commander to load files with a certain extension into a particular application. You might tell it to load all files ending in the letters DOC into Microsoft Word, for example.

There is also a simple text editor and a program that can be used to transfer files to and from another computer when their serial ports are connected together via a cable (not supplied).

Although the Norton Commander is a good program, it is not as powerful as XTree Gold. Symantec is about to release an alternative DOS management program, however, closely based on the Norton Desktop For Windows. It remains to be seen whether this will offer any significant advantages over conventional DOS file managers.

The Norton Commander gives you a bit of everything. Here there is a 'tree' map on the left, a file listing on the right, a user-defined menu in the middle and even the command prompt underneath it all.



level' or 'root' directory and a hard disk will almost certainly have many other subdirectories branching off this. These subdirectories may then be further divided into further levels of subdirectories. To access the files stored in a subdirectory, you must either make that subdirectory active by using the CD (Change Directory) command or you must add that subdirectory to the path statement in the autoexec.bat file.

Already this simple operation is starting to sound complicated. However, using a file management program, moving down the directory structure is as simple as tracing your cursor down a graphical map of the directories. Copying a file can then be done simply by selecting the file from a listing on screen and pointing to the directory to which it is to be copied.

Life without windows

Several of the programs discussed in the panels provide a file manager ranging from the exceptional power and sophistication of XTree Pro Gold to the much simpler GeoWorks. However, even the most elementary of file managers is a great improvement over raw DOS.

Menu programs provide a different way of simplifying DOS. Whereas file managers reveal the directory structure of the disk,

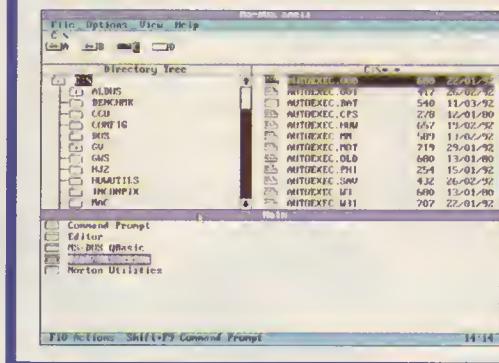
DOS 5

The latest release of the PC operating system, DOS 5, actually provides its own set of disk management tools and desktop utilities. Most significant among these is the Dosshell program. This provides an XTree-like view of the disk plus a menu from which programs can be started. It even lets you start up several programs and flip from one to the other.

While DOS 5 is certainly an improvement over earlier versions of DOS, its suite of utilities does not match the power and sophistication of most of the specialist tools reviewed here. By comparison with XTree Gold, the DOS 5 File Manager is trivial. Its 'task swapping' does not rival the kind of multitasking that is possible using Desqview.

Switching from one program to another under Dosshell is very slow, it cannot display programs in windows and it cannot deal with problems caused by memory-hungry programs.

The Dosshell utility that comes with DOS 5 includes a file manager, seen here in the top part of the screen, and a menu system shown beneath it.



menu programs actually hide it. They allow you to create menus of commonly used programs so that you can select those programs by name instead of having to manoeuvre your way through many levels of subdirectories to find a program's executable file.

Taken to task

One of the principal limitations of DOS is that it only allows you to run a single program at a time. Nor does an ordinary

menu program do anything to address this problem. But there are some so-called 'multi-tasking' programs that perform the neat trick of allowing you to switch from one program to another without having to exit from either of them.

Quarterdeck's Desqview is the most famous DOS multi-tasking utility. When you first load it up, it looks much like any ordinary menu program on the whole. However, from its menu you can load several different applications without

WINDOWS AND BEYOND

NewWave 4 ● £136 ● Hewlett-Packard: 081-673 1210

Norton Desktop For Windows ● £99 ● Symantec: (0628) 776343

Try as I might, I couldn't do justice to this feature without at least a sideways glance at Microsoft Windows. After all, it is the most successful interface to DOS ever launched. Windows incorporates many of the features of the other programs reviewed here, but it also goes much further. It gives the user a complete 'operating environment' which completely transforms the way you use the PC.

At one time Windows was the plaything of the wealthy. However, the price of PC hardware has tumbled over the past year or so and it is now possible to buy a Windows-capable 386SX PC for around £700. For £1,000 you could get yourself quite a sophisticated Windows machine. There is also a good range of realistically-priced Windows software around including good word processors such as Lotus Write (£149) and Desktop Publishing packages such as Serif's PagePlus (£119).

To a large extent, Windows solves the problems of DOS's notorious unfriendliness. It lets you launch programs just by clicking on little 'icons'. Programs are then loaded up into overlapping windows which can be resized or moved around on screen. Windows can load regular DOS programs in this way too but it really comes into its own when working with applications that have been specially written for it.

Windows applications can take full advantage of the environment by using a common set of tools to take care of printing or displaying fancy character styles on screen. In most cases, Windows programs can also easily exchange data with one another.

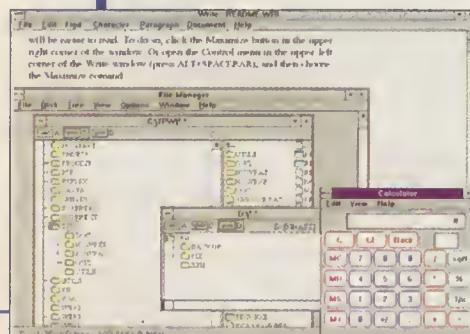
The recently-launched Windows 3.1 comes with a good file manager built-in. This is roughly the equivalent of a DOS program like XTree. While it doesn't provide the full range of XTree Gold's features (no formatted file viewing, for instance) it does benefit greatly from a simple point-and-click operation. For example, to move a file from one disk or directory to another, you would just highlight the file name using the mouse, then drag that file into another directory which can be displayed in a different window.

Even though Windows 3.1 is much better than the horrible DOS command line, some people think that there is still room for improvement. Which explains why some companies offer alternative interfaces to Windows. Probably the two most famous of these are the Norton Desktop For Windows from Symantec and NewWave 4 from Hewlett-Packard.

Not only does the Norton Desktop make several cosmetic changes to the Windows environment but it also adds a number of completely new features. Its file manager includes formatted viewing and it also has an undelete function that lets you restore files that have been erased from disk. And there is a batch language that can be used to write short programs to automate your work in Windows.

NewWave 4 effects even more drastic changes to Windows. Whereas the Norton Desktop gives you an interface to your disks and directories, NewWave 4 effectively hides them from you. Instead of bothering the user with such details, it handles all the disk-related matters itself. What the user sees is a kind of computerised filing cabinet into which folders of documents can be stored. This folder-based interface may be unfamiliar to most PC users but it will be immediately familiar to Macintosh users. And the Macintosh still has a reputation for being one of the easiest-to-use of all desktop computers.

Microsoft Windows is fine if you intend to make full use of it. But it certainly isn't the only way to make DOS more accessible. If you are one of those countless thousands of users who have no need or desire to use Windows, why forsake DOS when you could use one of two of the programs reviewed above to help you patch up your differences?



If you really hate DOS, maybe your best salvation is to start using Windows 3.1. This includes a set of utilities such as the word processor, calculator and file manager shown here. And it lets you run several programs simultaneously.

Alternatively

When it was first released, Lotus Magellan (£115) was one of the most powerful file managers and 'launchers'. However, the product has not been significantly updated for more than two years and is no longer keeping up with its competitors.

For anyone looking for a fairly cheap XTree 'clone', PowerUp software sells a file manager called DOS Director at a cost of £49. This is moderately capable but does suffer from a form of 'copy protection' which prevents you installing it more than five times.

There are also some very capable programs to be found in the shareware catalogues. Although you can get shareware programs for just a few pounds a piece, remember that you should pay an additional amount to register those programs if you intend to carry on using them. Registration details are normally provided on disk.

If you want to try out some shareware file managers, you could start off by trying TreeTop, Treeview and Hard Disk Director. All three programs provide a subset of the capabilities of XTree Gold. The best-known shareware menu programs include Automenus, PowerMenu and PC-MasterControl. If you are looking for a Sidekick-like set of pop-up utilities you will be spoilt for choice. Power Desk, PC DeskTeam and IMX Co-Pilot are all worth a look.

having to exit from any of them. Desqview 2.4 (£99.95) can be used on PCs with no additional extended or expanded memory above the base 640K.

To take advantage of extra memory, you will need Desqview 386 which comes with a sophisticated memory manager called QEMM and is available for £179.95 from Quarterdeck on (0245) 496699.

SIDEKICK 2 ● £79.95 ● Borland (0734) 321150

These days we have become used to the fact that the PC is capable of doing more than one thing at a time. Using Microsoft Windows or Desqview, you can have several programs loaded and switch from one to the other with a couple of keystrokes or mouse clicks.

It used to be the case, however, that the PC ran strictly one program at a time. If you wanted to use another one, you had to exit from the first one. So when Borland launched Sidekick back in 1984, the program seemed to be doing the impossible. You could load up Sidekick and keep it hidden away out of sight in the computer's memory. Then you could load up some other program and magically pop Sidekick back on to the screen by pressing a special combination of keys.

Even today, pop-up programs like this are still useful to have around. And the updated Sidekick 2 is one of the best of its kind.

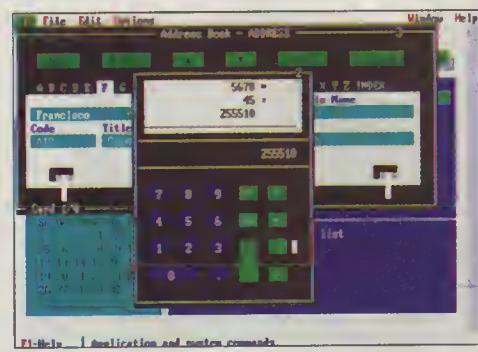
Unlike some of the other programs reviewed here, Sidekick 2 makes no attempt to change the way you use DOS. It has no disk organising tool to compare with XTree and cannot be used to launch programs from a menu like The Program Director.

Instead of starting up some other program from within Sidekick, you are able to start up Sidekick from within another program. You then have immediate access to a multi-window text editor, an appointments diary, calculator and address-book. If you have a modem connected, it can even dial phone numbers for you.

If popped up over a program that uses 'text-based' rather than a graphics display, it can even copy portions of that programs screen and paste them into other programs.

Essentially Sidekick 2 provides ready access to the utilities that DOS forgot to provide. Since all these utilities are just a keystroke away, this may be the simplest DOS upgrade for anyone who does not want all the features of a multi-tasking environment.

Sidekick 2 gives you a set of handy utilities just a keystroke away. It doesn't give you any special facilities for organising your disks though.



If all you require is ready access to a range of desktop tools, there is a much more straightforward solution available to the determined PC user. Using a pop-up program such as Sidekick, you will be able to keep those tools hidden away in your computer's memory, ready to appear at a moment's notice on top of any other program you might happen to be using.

If you are frustrated by the unhelpfulness of DOS, it is probably time you treated yourself to one or more programs to make life with your PC a little less of a headache. Maybe a good file manager is all that's needed. Or a set of pop-up tools. Or maybe it's time to bite the bullet and make the switch to a complete graphical environment such as GeoWorks or Windows.

XTREE PRO GOLD 2.5 ● £120 ● Xitan (0703) 899113

If you want to see what a good file manager can do, you need look no further than XTree Pro Gold 2.5. This is fairly expensive for a program of this sort. But it is also exceptionally powerful.

The XTree screen is divided into three areas. The main area displays a map of your disk showing a tree-like structure of all the directories and the subdirectories branching off them. Beneath this area, a window lists all the files in the currently selected subdirectory. On the right-hand side of the screen a third window shows various statistics such as the number of files in the directory and the amount of disk space they take up.

When you need to perform operations on several files at a time, you must first indicate those files by scrolling down the names in the file window and pressing 'T' to 'tag' them. The names of tagged files are preceded by a small diamond-shaped symbol. Large groups of tagged files can then be easily deleted or copied to other disks.

You don't have to tag files one at a time. You can specify filename patterns such as *.BAK to select and tag all files ending with the extension .BAK. If you wish, you can even tag all matching files through the entire disk. This could be used, for example, to delete huge numbers of backup files in a single operation.

An entire directory of files can be manipulated just as easily as a single file. You can 'prune' a directory so that all the subdirectories branching off it are deleted. Or you can 'graft' a directory so that both it and its subdirectories are appended to some other subdirectory. Operations such as this would be extremely difficult to do using DOS alone.

There is more to XTree Gold than just its file and directory

organising facilities. It includes a variety of file viewers that can display the contents of files as they would appear in the programs used to create them. A Lotus 1-2-3 file is shown in the familiar spreadsheet format and a PCX graphic is displayed as a full-colour picture.

If you want to create or alter text files, XTree has an editor. This can be handy if you want to edit system files such as Autoexec.bat or Config.sys. And there is even an archiving program built in. This lets you tag files and compress them into the popular ZIP file format. A ZIP file is typically many times smaller than the files it contains. Archives are often used when sending files via the telephone line using a modem. To get at the files in an archive, a special 'unzipping' program is normally needed. However, XTree Gold also includes an option to create a self-extracting archive which will extract the original files itself.

For heavy-duty file management, XTree Pro Gold would be hard to beat.

If you have numerous directories and thousands of files on your hard disk, XTree Gold is the best way to take control of them. Here it is displaying the directories of two different disks.



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DreamFactory



PC Screen Shots



COKTEL VISION

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War games are one of the oldest computer pursuits, and are based on a very ancient gaming tradition. Veteran gamer Robin Matthews makes a foray into the wonderful world of hex grids and combat tables.

In the world of computer gaming, war games are probably unique. As a genre, they actually existed before the arrival of SIMMs, SIPP's and motherboards; it seems the Athenian Themistocles was very keen on war games, and used them extensively to practise tactics and manoeu-

vres prior to his stuffing of the Persians at Salamis. A computer version would no doubt have been useful, but in 480BC there was a real shortage of floppy disks!

War games developed into chess, draughts, backgammon and other abstract variations, and, in more recent years,

fuelled the development of commercial board games. Once computers arrived these board games became ideal for promotion to computer regulated games. The computer was able to provide an opponent, deal with hidden movement, perform all the number crunching operations and ideally leave the player to 'enjoy' the conflict.

War games deal with all aspects of mankind's most terrible invention. You can fight against the Hittites in R.T. Smith's authentic Ancient Battles, become a Roman general in Impressions' Cohort, try to defeat those colonial upstarts in Britannica's Revolution '76, alter the course of US history in Decisive Battles of the American Civil War (SSG), deal with the Corsican bandit in Peter Turcan's Waterloo and fight almost every battle of World War Two, in a multitude of ways.

One of the main combatants is the US software house SSI (distributed by US Gold in the UK), as PC Review detailed in Issue

— A QUICK SORTIE





8. It has been in the arms race from the very start, its Computer Bismarck appearing in 1981, albeit on the Apple II Computer. The early products were virtually no more than computer moderated games. Graphics were at best poor, and more than likely non-existent. This approach has been made into an art form by a Canadian company, Simulations Canada. Its titles include the renowned Main Battle Tank and Fall Gelb. The games are pure text, and their stance is one of no concession to graphics, merely complete accuracy and realism.

This is the classic trade-off in war gaming. To satisfy purists the product must be historically accurate and realistic. Playability is secondary as long as the right figure has been included for the thickness of the armour plate on the StuG III, and the game



Conflict: Korea - war going in a traditional mould.

is statistically as near to the actual event as possible.

Non-purists however, do return fire. What they want is for the game to look and feel right, but to be playable at the same time. This does not mean that Sim Canada products and others like Action Stations are unplayable. The latter from Internecine is recognised as the standard work on surface action. It does however require an enthusiast to come to grips with it, and someone who is not put off by pages and pages of comparative tables, ranges and lines of sight.

Other software houses developed systems based on board game rules, all showing their ancestry clearly. Many of the computer war games were in fact not as good as their cardboard predecessors, and as the hardware revolution picked up pace, the war game fell slightly under siege. Elsewhere arcade games, simulators and role-playing games were taking advantage of quicker hardware, better graphic standards and soundboards. The attitude



was almost one of realism being the most important aspect, and ignoring what was happening in the rest of the computer industry.

Although a major player, SSI has not had the killing fields to itself; some excellent products continue to come from the Australian Strategic Studies Group (SSG). The three volumes of Decisive Battles of the American Civil War are the best treatment of that conflict, and Rommel has stood the test of time well. Although the

The 5000 Soldiers of Doctor T

In the past five years Dr Peter Turcan has made a name for himself as a designer of superior war games. Laurence Scotford talks to him about his work, war games and war in general.

Dr Peter Turcan is probably the most impressive talent working in the field of computer war games today. Having produced six superb war games, each universally acclaimed, he has set exciting new standards for a traditionally conservative genre. Peter's interest in war games began at the tender age of 14 when he was actively playing table-top war games and had even started a war games club. By the time he went to university, he had given all that up, but had developed a talent for programming. "I don't play computer games at all, and I hardly ever play war games or any other games," he claims.

He started programming word games at university where he did a PhD in computer science. His first project was Word Mastermind, which was followed by Scrabble. The latter game was professionally marketed and became a phenomenal success even though it didn't make Peter a lot of money.

Peter spent a couple of years as a journalist editing a computer magazine, but in 1985 the title folded, leaving him with lots of unexpected time to sit and think. A couple of months later he had come up with the idea of a war game which played in 3D. "The basic thing was actually what it was like just to be a commander," Peter explains, "because when you play war games you play everybody, which is hopelessly unrealistic. It's like the story that's on the TV at the moment about those

British people who were killed in the Gulf war by friendly fire. Basically the problem is the weakness of battlefield communications. Now if you take something like the Gulf War, which is the highest technology war there has ever been, and still you can't stop your own side shooting themselves, and if you go back to something like Waterloo, there were whole battles fought between regiments on the same side. So the idea that you play everybody, the idea that that is a realistic simulation of what battle was like is just absurd."

He wanted to come up with a computer system which introduced the concept of fallibility. The player would play the commander, and would be constricted in a realistic way by 'the fog of war'. Peter elaborates, "Every instruction is open to misinterpretation, and in some cases quite deliberately so. The instructions themselves had to be open to a variety of interpretations. Partly because by the time they get there they might not quite fit: 'Shoot at the guns on top of the hill' — there aren't any bloody guns on the top of the hill, there are guns down in the village, does he mean that, or does he mean the infantry on top of the hill? Well a sensible commander is going to choose one or the other, a robot is going to say 'Order cannot be responded to because it doesn't fit'. So it was to give that flexibility that the program does a best fit of the order if it cannot make some sense of what it's told. "The fundamental idea was to try to capture what it's like to be a commander. Not to be a soldier, not to be a gunner, not to be anything else other than the commander-in-chief. You don't bother with ammunition, you don't bother with lines of sight, or anything else. That's other people's problems."

On war games

Peter is understandably dismissive of traditional hex-based war games that give the player a god-like influence. "They're pointless as simulations of war. A war game is either a war or a game. If you've got a god-like view then it's primarily a game, a competition between you and your opponent. Realism-wise it's almost pointless. Not quite pointless, there are other things in a war game. For example, in a table-top war game you can capture



One of the striking games from Dr. Peter Turcan, Waterloo places you firmly in Napoleonic's shoes.

SSG products still operate on the Hex system, the main elements of Orders,

Movement and Combat are far smoother, and each release is accompanied by good documentation and professional colour glossy maps. SSG also has an advantage with its 'Warpaint' system enabling the player to customise scenarios, considerably increasing 're-playability' and satisfying one of the classic attractions of war games, 'what would have happened if ...'.

SSG also had a hand in the development of the well rated Fire Brigade. This simulation of one of the Battles for Kiev during World War II, was released several years ago, but was way ahead of its time. Graphically it is superbly crisp and clean, the interface is super-smooth, the documentation is outstanding, and it even contains a detailed tutorial. The system takes some time to get to grips with, but the investment is well worth it. The lack of any sequel remains one of the mysteries of computer wargaming.

I don't think there's anything morally different between playing a war game and watching a war film. Violence is fun, that's the problem."

you don't have the problem of being able to see clearly in the foreground and having a muddled view further on. In a modern battle that might be less important because the commander's have got plans and charts. They've got electronics to tell them what's going on."

So does he think that other war games designers have got the presentation aspect all wrong?

"What they've done is they've produced computer versions of board games. They haven't gone back a stage and dumped the war game idea and taken the battles themselves as a basis. I think they're on a hiding to nothing, I think that will just die. I think hex grids will die. The Harpoon style approach, with big plan views of the world, I think has probably got more life in it, but battles are not fought on hex grids. I think it's just because the best programmers have been involved in other things."

Probably the best SSG game, and one of the best games of the last few years is Warlords. This is a fantasy/mediaeval strategy game with good graphics and interface. The mediaeval period is not widely covered, and the fantasy angle adds another dimension as regards foes and enemies. It deserves a place in any war gamer's collection. Finally, as regards SSG, the early previews of its awaited Carriers of War make the game look very interesting, and graphically superb. Keep an eye out for this one.

A different approach was taken by the publisher Koei. In a very idiosyncratic Japanese way it produced a huge and complicated games engine to run its strategic 'campaign' games involving feudal Japan. Nobunaga's Ambition produced a son in Ambition II, was developed into Genghis Khan and most recently appeared in L'Empereur. The Koei system is unique with its emphasis on economic and political considerations, but, although the engine worked acceptably with the first products it now looks dated.

Internece is also worthy of mention, their titles include Action Stations, Worlds at War, White Death and Blitzkrieg. Worlds at War is a real oddity, Carrier warfare translated into a science fiction, inter-planetary warfare scenario.

Graphically non-existent, it has received a

very muted reaction. The remaining two products are both based on board games, and are first-rate examples of hex-computer war games. Graphics are above average and they are probably about as far as this genre can go.

Dr Peter Turcan's products are also improving on every release, and Dreadnoughts (reviewed in this issue) is almost a brilliant game. See below for an interview with Turcan himself on how he perceives the development of war games.

Impressions produces the 'Minatures' series of war games, the emphasis being far more on playability than realism. To date there has been Rourke's Drift, Fort Apache, Charge of the Light Brigade, and Cohort. Most of its products deal with a



Perfect General: combines good graphics with playability.

On the history of war

Painstaking research is involved in all Peter's games. "If you get something like Waterloo it's very easy," he informs me, "you can get books which detail counts of men, guns and everything else. Far more detail than you need in a simulation. If you move to something like Borodino, it's much more difficult, because all of the accounts written in English are all based on French accounts and they were flawed as far as the Russians were concerned in the sense that there are all sorts of anomalies found in the command structures and it was only by having stuff translated from the Russian that those anomalies were ironed out."

"Most books that you can buy in bookshops, the ones with glossy covers, are of little value, because they're just trying to tell a story. The most useful are always the government official accounts."

A major aspect that Peter has discovered during the course of his research is the importance of sound.

"One of the mistakes in Borodino was to ignore sound, but I've since changed my mind on that because the accounts of battles by people who actually fought in them is that what dominates is the sound of shells and bullets flying because you can't see the bloody things."

"You take one soldier in the war against the Japanese, an American. You throw yourself into the nearest hole you can find, and all you can hear is the sound of bullets whistling above you, you can't see anything. There's nothing to motivate you visually. It's all the sound. Eventually one guy says, sod this, this is getting boring, puts his head up and shoots back. And the other side, all they can do is hear these bullets coming, and they've got to duck. So it's a to and fro based on the sounds, not on what you can see."

On morality

I asked Peter if he thought there was a moral problem with war games. "I don't think so, no. I don't think there's anything morally different between playing a war game and watching a war film. Violence is fun, that's the problem. So I don't see there's any difference. I don't see any obstacle to doing it."

But doesn't a war game sanitise the whole experience of war?

"It doesn't sanitise it any more than the general lust people have for



single historic action as opposed to a campaign, have simplified rules and are more akin to table-top wargaming than board-wargaming. They are criticised by the 'top brass', in particular for their almost cartoon style of graphics. Don't knock it until you've tried it, they certainly do provide some pleasant entertainment.

Quantum Quality Productions (QQP) has recently joined the fray, and has entered with two real heavyweights. The Lost Admiral, and the Perfect General have similar gaming systems even though one covers sea, the other land operations. One of the co-designers is Mark Baldwin, famed for the legendary Empire. That classic is really the basis for both of these products, and that is a recommendation in itself. The graphics are good (very good in Perfect



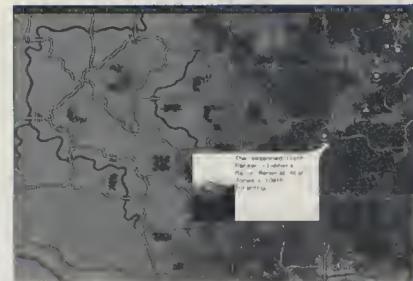
Carrier Strike: one of SSI's best.

General), but the real strength of these products is the friendly interface and playability. You will even find pull-down help menus! There should be enough to satisfy everyone here, and if you're a die-hard you can even turn on a hex-grid to make you feel at home!

Each game can be learnt in one solid evening session, the documentation being unusually well written, but like all good games, the subtle nuances may require more time. A UK distribution deal should shortly be set up, so if you want to be a Perfect General this might be the way to do it.

Before concluding this brief look with a final product, other 'one-offs' are worth a mention. Harpoon from 360/Electronic Arts remains a brilliant modern naval sim, (watch out for the land based Patriot), Universal Military Simulator II (MicroProse) may become more playable with the Planet Editor, and Rules of Engagement and its forerunner Breach 2 (Mindcraft) are the best 'squad' level war games.

So to finish on one war game, this has to be Broderbund's *Patton Strikes Back* (distributed by Electronic Arts in the UK, and reviewed in PC Review Issue 2). This is designed by Chris Crawford, author of *Balance of Power* and is one of the best war games on the market. Why? It simply has



Patton Strikes Back: Chris Crawford's comprehensive WWII simulation.

that elusive blend of playability and first-rate graphics. The interface is a dream, the rules are simple, the game content good, and the accuracy level is sufficiently high.

It seems as though, at long last, software publishers and game designers have accepted, that to make war games appeal beyond the narrow range of enthusiasts, attention must be given not just to realism, but to playability. The PC is now able to offer superior graphics, good sound support, and, with a mouse, will support an easy user interface, so the message from war game players to war game designers is, don't just sell the steak, sell the sizzle!

The 5000 Soldiers of Doctor T

violence. Watching the gulf war at night was a hugely popular thing. I'm not saying there's a blood lust, but there's a fascination for it. I don't think there's anything to be gained by ignoring how violent history has been, and how violent it will continue to be. Apart from that, the people who actually study war and war games are usually the least aggressive people you've ever met."

On war game design

On the surface, Peter's war games are visually spectacular, but does he go into as much detail as other war games concerning variables like fatigue and morale?

"If you don't take fatigue into account you have superhuman battles. Basically I go into as much detail as a table-top war game with tables of figures, which are usually slow moving but taking lots of different things into account. In fact the best simulations concentrate more on the human side than on the mechanics of the weapons."

"The best simulation of a Napoleonic battle is one which is a clash of the morale and capabilities of the men rather than 'does this make of musket fire ten yards further than the other make of musket'. Battles are not decided by that. If you don't take fatigue into account there's no point in keeping reserves, because your battle line is never going to run out of energy. Reserves are kept partly because you've got fresh people, but partly because they're organised all together. What tends to happen is that units break up and become ineffective. The organisation and the morale side in the Napoleonic wars is I think, the deciding factor. You can almost ignore the difference between a six pound gun and a twelve pound gun."

So how do the sea simulations differ?

"The AI in Armada was very loosely based on the land battles. Quite a number of people enjoyed Armada but it's not a very effective simulator. Land wars are based on terrain, even in modern land wars terrain is the dominant factor. In sea the dom-

inant factor is the relative positions of your fleet and the enemy fleet, and the fact that you might be going at thirty knots and zooming over the terrain is not important, it's the relative positions."

On the future

So where does Peter Turcan's unique battle system go from here? Initially he plans to produce several more scenarios using the current system, probably concentrating on those battles that are visually spectacular. It seems likely that he will continue to concentrate on battles of the past. "In modern warfare the battle is fought over too large an area, dominated by too much technology, too many electronics, too many mechanics. You get bogged down in mechanics and not in decision making."

Peter is also looking at the possibilities presented by CD, which he sees mainly as an opportunity to include encyclopaedic background information rather than enhancing the actual games. Speech output is another area with may well be exploited in the future.

Whatever happens, it looks like Peter Turcan plans to continue dragging the world of war games out of the dark ages, and there is certainly so much more to be done.

"A war game is either a war or a game. If you've got a god like view then it's primarily a game, a competition between you and your opponent. Realism-wise it's almost pointless."

LURE OF THE Temptress

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BUT DELIVER US
FROM EVIL...

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ATTACHING PERIPHERALS

In this series of articles about the PC, hardware and software, we'll be taking you, step by step, through the ins and outs of using, controlling and upgrading your machine.

You'll find out what the PC's components are, how to use them, and how to use PC software to get the best out of your computer.

In this instalment of our First Steps, we'll be looking at just some of the peripherals that can be attached to your machine to enhance its performance.

So far in the First Steps series, we've looked at a number of ways to expand your PC by adding internal boards and devices. This month, we're dealing with external peripherals; add-ons that don't require you to open up the machine.

At the back of your PC, you'll find a number of sockets and ports to take

peripherals — exactly how many depends on the PC in question. The nearest you'll get to a 'standard' set-up is probably the following: one parallel, one or two serial ports, a graphics card port, keyboard socket, power supply, and monitor power supply. Some modern, PS/2-style machines will also include a dedicated mouse socket. The picture below shows these in detail.

Common devices such as a printer and modem usually attach to the parallel and serial ports respectively (serial mice are also common, but there are alternatives available to avoid a clash). More specialised peripherals, such as a CD-ROM drive, or joystick, require dedicated ports on a card which you fit into a free expansion slot. With external add-ons, the device will usu-

Any port in a storm?

The PC here is a modern Goldstar design, but you should be able to identify most of your own PC's ports from this diagram. Note that Goldstar has helpfully labelled the ports itself for the new user (why on earth don't all manufacturers do this?).

Monitor power supply

Monitors will usually be supplied with either a mains cable or an IEC cable or both. If your monitor is currently connected directly to the mains as well as your PC, hunt down one of these cables to connect the monitor to the PC, and save on plugs.



Cooling fan

This whirrs into action when you switch the machine on, to keep the power supply unit behind it from overheating.

A/C mains plug

Parallel port

Generally used for one-way communication, from the computer to an output device, and that output device is most commonly a printer. Just about all PCs will come with a built-in parallel port, some with two. The parallel interface is one of the few areas in which PCs are universally standardised.

Keyboard socket

This is the PS/2-style connector on the Goldstar. Most older PCs use a larger 5-pin socket.

Mouse port

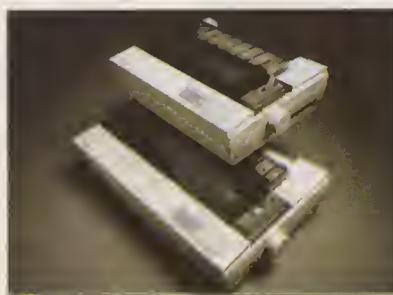
Again this is a PS/2-style direct socket for a mouse. Most PCs will make use of a serial port for the mouse, or you can buy a mouse with its own expansion card, which will take up one of your slots above.

ally need software to 'drive' it — to tell the computer that the device is attached and how to use it. Printer drivers, for instance, are normally included in commercial software, such as word processors or databases. If a game supports print-outs, it will usually contain a basic printer driver in the program, and you won't get any of the fancy font effects that the more comprehensive drivers in business software give you — but then, that's hardly the point.

The modular design of PCs means that not only can you expand your system by adding peripherals, but improve on the basics as well. If you find your monitor too small, or the keyboard not to your liking, you can always 'upgrade' by buying better ones and simply plugging them in.

The following items are by no means exhaustive, but represent some of the most common expansions and upgrades you can make to your PC using the built-in sockets with the machine.

EXPANDING



Low-cost dot matrix printers have improved immensely in terms of printed output and style.

Printers

Not the most obvious of add-ons for the games-player, a printer rapidly goes on the shopping list of anyone who uses a PC for general purposes. Letters, reports, memos, posters, graphics work ... without a printer, these are viewable only on screen. Printers these days give excellent value for money. There are three main types of printer on the market: dot matrix (these can cost less than £100), inkjet, and laser printers (which are now well below £1,000).

For text output which doesn't have to have a professionally printed look, a 9-pin dot matrix printer will suit you just fine, although a 24-pin model has noticeably better print quality at around £50-£100 more. Dot matrix printers work by firing ink-headed pins at the paper to create each character. 9-pin models have a printhead with a single row of nine pins; 24-pin printers have two rows of 12 pins each. Thus you get more dots to your character, and a better resolution with a 24-pin printer.

Fast catching up in popularity are inkjets. A bit pricier, they'll give you another distinct improvement in print quality, and also have the advantage of being virtually silent in operation. These squirt ink from a set of tiny nozzles at the paper to make up each character, which is much less messy than it sounds. Generally the 'printhead' consists of both the nozzles and the ink container and are changed as a unit when your ink runs out.

The best output of all comes from a laser printer. Once the preserve of designers and large companies, lasers can now cost well under £1,000. These work in a quite similar fashion to photocopiers, and will only take single sheets of paper, normally A4 size, rather than the continuous sheets of varying width of the dot matrix. Inkjets will often also take both single sheet and sprocketed continuous stationery.

You can connect a printer to either your PC's parallel port or the serial port (check which interface the printer has before you buy), although the former is much more common. When you buy your printer, check that the requisite cable to connect the printer to the PC is included with it.

Good brand names to look out for in the dot matrix market are Seikosha, Star and Citizen at the low-budget end, and Brother and Panasonic for slightly more up-market models. Canon Bubblejets and Hewlett-Packard DeskJets dominate the inkjet market, with Canon's slimline BJ-300 a particular low-cost favourite. In the laser printer market, you'll find Canon, Brother and Hewlett-Packard again, while Star produces some very inexpensive models.

Modems

Modems come in two versions: internal modems, which fit into a free expansion slot inside the PC, and external modems which connect to the serial port. Internal modems are unobtrusive and convenient once fitted; they also tend to be slightly more expensive.

A modem will enable you to send and receive computer data over the telephone lines to another computer. This can be direct to another modem-equipped computer, or via a bulletin board, or mailbox system. PC Review receives many of its articles this way, and readers can correspond with us via our mailbox on CIX — the Compulink Information Exchange. Most of this correspondence is in the form of messages or articles for the magazine, but you can also upload or download programs, or take part in multi-user games on some bulletin board systems.

Once you have bought and fitted a modem, you will need software in order to use it — as often as not, this will come with the modem anyway; if not, there are several good public domain and shareware programs around, such as Telix or Odyssey. This will enable you to set the correct protocols to ensure the machine at the other end of the line can understand what you're sending them, and contains the commands needed for transmitting, receiving, storing data, along with such niceties as auto-answering the telephone, password protection and setting up shortcuts for frequently dialled numbers.

You can also buy a fax card for your PC — or indeed, a combined modem/fax card — which will transmit files over the telephone lines and output them at the other end on paper in the form of a conventional fax. This cuts out the process of printing, say, a word processed document and feeding it through a standard fax machine. Fax cards are generally Group 3 compatible (the vast majority

DATAFLEX'S UNOBTRUSIVE PACKET STRODCOM IS PARTICULARLY CONVENIENT WITH LAPTOPS.



Expansion slots

These backplates cover the PC's internal expansion slots. When expanding the PC with devices which need an expansion card, you need to remove the PC's casing and the backplate, and fit the card into the accompanying expansion slot. The cards will incorporate the ports and sockets required for the device in question.

VGA graphics port

Leads out from the graphics card inside the machine. On your PC, the VGA graphics card may well be using up an expansion slot, but the connector here will look the same.

Serial ports

COM1 and COM2 are the serial ports, used for bi-directional data transmission, most usually for mice and modems. Your PC may only have one serial port. Serial ports come in two sizes, the older 25-pin D-type, and newer 9-pin D-type. Obviously, any peripheral you buy which uses your serial port will need to use the correctly sized connector. If it comes with the wrong one on the end of the cable, you'll find that adapters are easily available, and sometimes manufacturers will include the requisite adapter as part of the package.

FIRST STEPS

UPGRADING

Keyboards

In a market where prices are falling all the time, and manufacturers compete fiercely to produce value for money PC packages, one item where corners are frequently cut and costs pared is the keyboard. If you do a lot of typing, or like the precision of keyboard control for games, a sub-standard keyboard can be a serious drawback. If your PC is getting long in the tooth, your keyboard may simply be knackered through wear and tear.

Keyboards are a notoriously personal matter. It's difficult to describe how any particular make of keyboard feels without sounding like the worst kind of wine snob: terms such as spongy, flabby, dead flesh, clacky, and tacky reappear again and again. As a common denominator, the keys should have a certain amount of 'travel' on them, so that you have to press a key down some distance before the character is registered, with either an audible or tactile 'click' to confirm subconsciously to the user that the keystroke has been made.

Keyboards evidently shouldn't be bought blind, but tried out at some length before you decide whether to



The 101-keyboard: function keys along the top and a separate numeric keypad.

buy. On a more practical level, make sure your new keyboard will fit your machine. Some new computers such as the Amstrad 5000 series and Goldstar's current range, have a small PS/2-style socket; older machines have the bigger AT socket.

There are two types of PC keyboard, the 84-key XT keyboard and the 101- or 102-key AT keyboard, although you'd be highly unlikely to find an XT keyboard on a new PC in the shops these days. The XT keyboard is distinctive in that the function keys sit in two rows down the left hand side rather than along the top and there is no separate numeric keypad. If you currently have an 84-key board and you'd like to upgrade, be warned that the two types are not wholly compatible — what you need to buy is a switchable XT/AT keyboard (which will still have the full 101/102 keys), or an auto-sensing keyboard. As ever, check before you buy.

of office fax machines are Group 3 standard), and the software with them will usually support polling (storing faxes to be sent at a particular time, eg, after 6.00pm when phone rates are cheaper) and short cuts for dialling frequently used numbers.

Manufacturers with a strong range of modems, both internal and external, budget and pricey, include Dataflex Design, Pace Micro Technology and Miracom. We'll be dealing with modems, fax cards and computer communications in greater detail in the September issue of PC Review; bear this in mind if you're thinking of buying a modem now.

Disk drives

Some of the very compact PCs on the market simply don't have room inside the casing to fit a second hard or floppy disk drive, but it is possible to buy external devices. Most slimline machines are fitted with the more up-to-date 3.5" disk drives, and if your PC is fitted with 3.5" drives only, you shouldn't need a 5.25" drive these days unless you're regularly given 5.25" data disks to use. But if your machine is fitted with 5.25" drive(s) only and there's no room for any more, then at least adding an external 3.5" device, rather than replac-

ing the drives, won't render your existing disk collection obsolete.

The cost of external hard disk devices means that it's usually more cost-effective to replace your existing internal hard disk with a bigger one — bigger in capacity doesn't mean bigger in size, or to look at the possibility of adding a hard disk on card if you have any free expansion slots (See First Steps, Issue 3). Most external drives will require you to open the machine and fit a supplied PCB edge connector into the

slot provided on the ribbon cable running from your existing disk drive.

There are a number of external disk drives available through distributors and mail order companies which are manufactured in Taiwan; however, one British company which makes a full range of PC external drives, from low density 5.25" devices to high density 3.5" drives is Cumana.

Contacts

- Brother (061) 330 6531 (printers)
- Canon (081) 773 3173 (printers, scanners)
- Citizen Europe (0895) 272621 (printers, monitors)
- Cumana (0483) 503121 (external disk drives)
- Dataflex Design (081) 543 6417 (modems)
- Hewlett-Packard (0344) 763767 (printers, scanners)
- Logitech (0344) 891313 (mice, scanners, trackballs)
- Miracom (0473) 233888 (modems)
- Mouse Systems (0420) 544979 (mice)
- Pace Micro Technology (0274) 488211 (modems)
- Panasonic (0344) 862444 (printers, monitors, scanners)
- Philips (081) 689 4444 (monitors)
- RSC (0923) 243301 (distributor with very wide range of peripherals)
- Star Micronics (0494) 471111 (printers)

Mice

Comparatively few PCs are sold these days without a mouse thrown in, but plenty of them are sold with very cheap devices which will not convince you this is an intuitive, easy way to control your software.

More and more games are being designed to be most comfortably controlled by a mouse, and certainly a mouse is virtually the only sensible option for any menu-driven program.

There are three ways you can connect a mouse to your PC. Bus mice come with a card to be fitted into a free expansion slot which contains its own socket for fitting the mouse cable. Serial mice connect to the serial port. PCs with PS/2-style mouse sockets can be fitted with PS/2-style mice.

There are also three distinct



Logitech's MouseMon: in left and right handed versions.

technologies used to manufacture mice. The cheapest and most common have a protruding ball set into the base. When you roll the mouse on the desktop, sensors inside the casing transmit the ball's movement to the PC and translate that movement to the on-screen cursor.

Optical mice are more expensive, but can be more accurate — useful if you're doing precision graphics work, for example. These come with a special hard mouse mat, usually laminated in silver with a black grid on it. Here the movement of the mouse on the mat is picked up by light sensors inside it and the position relating to the grid is translated into cursor movement.

Finally, you can be very swanky and use a cordless mouse which transmits movement via a radio wave sensor attached to the PC.

Pretty well all mice sold these days are Microsoft-compatible — the standard in terms of mouse drivers. The Mouse Systems standard is designed for use with three-button mice. Having fitted your mouse, all you generally need to do is copy the programs supplied with it on disk to your hard disk. The installation program will either give you the

FIRST STEPS

option of putting a line in your start-up files so that your mouse becomes active every time you turn the PC on, or you can load it yourself (generally just by typing MOUSE).

Logitech is probably the current best-known mouse manufacturer, with cordless, PS/2 and serial mice in a wide variety of types. I've been using its "ergonomically designed" Mouseman for about a year now and find it extremely comfortable, although I still think the Mouse Systems optical mouse beats it for accuracy and precision. What you don't want is a nasty, rubbery thing which scrapes along the desktop and needs about three blubs on the button before anything registers on screen. Three final things about mice: firstly, get a mouse mat — saves scratches on the table-top and makes controlling the mouse much more accurate. Secondly, don't worry too much about whether your chosen mouse has two or three buttons.

Standard mouse control uses the left button to turn things on (equivalent to Enter on the keyboard) and the right button to turn things off (equivalent to Esc). Only the Mouse Systems standard really caters specifically

for a third button and virtually all games and other applications conform to Microsoft's two-button standard.

Thirdly, left-handed people should note that some mouse software contains options to enable you switch the left and right button functions, while Logitech's Mouseman comes in specifically left-handed and right-handed versions.

Monitors

Monitors are so much an integral part of the computer package that it may be some time before you appreciate whether yours is a quality model or not. There is a considerable difference in the clarity, crispness and amount of glare between individual monitors which aren't apparent until you compare them with others. Your monitor will also need replacing if you upgrade your graphics card from, say, CGA to VGA, since your monitor needs to match or better your graphics card. In other words, a CGA monitor won't show VGA pictures if you have a VGA graphics card — it'll work only with the card in CGA mode — but a VGA monitor will display CGA screens.

The best way to evaluate other monitors on the market is of course to make on the spot comparisons in



Super VGA monitors are more and more common on new PCs.

the shop. A number of manufacturers will quote you a 'dot pitch' rating when describing clarity of the image. Dot pitch is the distance between the red, green and blue bars which make up the on-screen dots, and dot pitches quoted are typically between 0.28mm and 0.31mm.

PC monitors come in two standard screen sizes (larger ones are available but start getting very expensive). 12" and 14", as measured diagonally from one top corner to the bottom corner opposite. The 14" models are, naturally, more costly, but if you're happy with the definition and clarity of your 12" model, there's no pressing reason to upgrade.

One recommendation I would whole-heartedly make to anyone buying a new monitor is to look for a model on which the controls

(horizontal and vertical hold, contrast and brightness) are placed conveniently at the front, instead of in deep fingernail-breaking recesses at the back. I can think of few activities more calculated to waste energy and patience than to-ing and fro-ing between front and back of the monitor twiddling at poky little switches and then gauging the effect on-screen when it could so easily be done from the front.

Health and safety has also become an issue with monitors, with concerns over radiation from screens, so that a number of manufacturers are now claiming their monitors are "low-glare" (which has more to do with comfort than health, but is a point worth taking into consideration) or "low-radiation". This is a topic which we'll be covering in detail in a future issue of PC Review. Until then, current guidelines advise that you sit well back from the monitor (at least 30" away), take frequent short breaks from the screen, and don't use for any length of time if you're pregnant.

Philips and Panasonic both make good clear monitors and Philips, particularly, has a wide range available.

Joysticks

Unless your PC already has a game card fitted, or you have a soundboard such as the Sound Blaster with a joystick port built into it, you cannot plug a joystick directly into your PC. There's no socket for one.

What you need to do is to buy a game card (around £20 or so), fit it into a free expansion slot and connect your joystick to it. Note, also, that you cannot take the standard digital joysticks that are used on computers such as the Amiga and ST; PC game cards use analog joysticks (which are better, in many respects, than digital ones, anyway), so you must make sure that this is what you buy. In next month's First Steps, we'll explain game card and joystick fitting in detail, with a step by step guide to installing them and a look at some of the best buys on the market.

For PCs you need an analog joystick.



Scanners

A scanner is a device which will 'read' an image on paper and store that image in digital form on the PC. The image can then be called up from a graphics program and edited, altered and otherwise manipulated. Scanners are supplied with a dedicated card to be fitted into a free expansion slot.

There are basically two types of scanner. Flat bed scanners look a bit like the top of a photocopier — here you place the image on the scanner to be read. They tend to be expensive, although you can find budget flat-bed scanners for £300 or so (such as the Corporate ScanPlus). With hand-held scanners, you take the scanner and roll it over the image to read it. These are considerably less expensive, but as you can imagine, a steady hand is needed, and they have a disadvantage in that the scanning beam tends to be narrower than A4 paper.

The five inch wide Logitech hand-held scanner costs around £200 and will scan at resolutions up to 360 dots per inch (the higher the resolution, the more memory the resulting scan will take up) and attempts to scan colours and shades as grey scales. Genius is another company with a good range of hand-held scanners.

Also, colour hand-held scanners are avail-

able for the PC, starting at around £300-£400. Hand-held scanning is a cost-effective way of incorporating images as graphics within a graphics program or DTP'd document, but make sure you have a wide flat non-slip surface to place your images on, that you don't have a hangover at the time, and be prepared to practise your smooth-rolling technique.

Trackballs

A trackball is, in essence, an upside-down roller mouse (see Mice, opposite page). Rather than holding and moving the entire mouse to activate cursor movement on screen, you rotate the upturned ball. A trackball has buttons which act in the same way as the mouse buttons do, and herein lies the rub: unless you perfect an idiosyncratic trackball technique, your hands will usually have to leave the ball to click on the buttons, as opposed to the more intuitive clicking action with a mouse. In compensation, trackball fans cite greater accuracy of movement, and point out that where a mouse requires a certain amount of free desk space to move freely, a trackball takes up no more space than the unit itself (which makes them far more suitable for laptops).

COVER STORY

How do you make an already enjoyable game even better? By adding extra players. Paul Presley takes you through the ins and outs of serial links, modems and networks

We've all experienced multi-player games at some stage in the past. Be it a simple game of two-player chess or a rather more enjoyable eight-player extravaganza with one of Epyx's Games series. The one drawback to these gaming get-togethers is that it does get pretty cramped around the one machine. Fortunately, there are ways to allow two or more separate PCs to join together, enabling each person to have a machine of their own. By physically linking two machines together with a cable which attaches to the serial ports (more than two machines if you're running the game over a network), you can play on one screen while your partner or opponent plays the same game on the other.

Serial linked games, while not exactly rare, are still pretty thin on the ground in this modern age of high technology, but if you know what you're looking for you can find some of the most enjoyable gaming experiences ever. Bullfrog, master of the 'God sim', has included a multi-player option in every one of its games since the original *Populous*. "The trouble with any computer player," explains Bullfrog's Peter Molyneux, "is that no matter how well it's programmed, after you play a few games you get a



Serial links: making

feel for what the computer player does. You can't tell whether a human player is going to throw a spanner in the works by doing something really stupid or by being really clever. Also, you can't have the emotional

attachment that you can with a human player, when you think to yourself, 'Oh, I know what he's going to do, I know him'. You just can't do that with a computer player and it'll be a long time, if ever, that you will be able to do it."

Populous is an ideal example of a link-up game at its best. Just knowing that the opposing army is being controlled by another human being adds to both the atmosphere and the challenge. "Quite a few bulletin boards

Serial links vs networks

As with serial links, networks are nothing new. Modem users have been able to experience the delights that are MUGs (Multi-User Games) for years, at least until the recent demise of CompuNet, Britain's foremost consumer network. Amongst the pages of travel information and home shopping services on offer, CompuNet ran a couple of games called MUD (Multi-User Dungeon) and Shades, simple text adventures where players would log on and for a running fee take part in adventures with other such users.

The network technology has recently leapt forward by several generations, to the point where now, in America, several big name games companies are researching, developing and even putting into operation networks of their own. This is helped by the none too encouraging fact (for us Europeans at any rate) that American phone charges are

practically non-existent (local area calls being absolutely free).

The largest commercial network currently in operation has to be the imaginatively titled Sierra Network (see panel for full details of what this family orientated environment is). According to Sierra's director of marketing, Jeffrey S Leibowitz, The Sierra Network has become popular for more than just the playing of multi-user games: "Although games are ostensibly why you sign on to the network, the main feature of the network seems to have evolved to be socialisation, in that it's an interactive network, you're actually playing with or talking to other people."

The Sierra Network currently has over 8,500 users regularly logging on from all across America. Interestingly, the third largest area of membership is in Florida, amongst the senior citizens living in the retirement centre of the states. "One main reason," according to Leibowitz, "is that they can socialise without leaving



the connection

throughout the world ran Populous competitions," says Molyneux, "so you could play with another human player somewhere else in the same country, which is pretty amazing, as it starts to get really exciting."

It doesn't just end with strategy games, though. Flight simulators are prime targets for serial link options and one company that seems to realise this more than most is Digital Integration. F-16 Combat Pilot was the first of the

The Sierra Network

Currently on offer to stateside users are everything from bulletin boards to flight sims. Once logged on, the users first choose appearances for themselves using an identikit system similar to that found in Police Quest III. With their looks taken care of, users can participate in:

Red Baron — Dynamix's detailed simulation of World War I biplanes allows up to four players to take to the skies against either a common enemy or each other.

Mini Golf — in the true tradition of Mini Golf centres all over America (and most British seaside resorts), Sierra Mini Golf features moving holes, crazy tubes and pipes, clown heads with gaps in the teeth and the compulsory windmill.

A bundle of card and board games (including Chess, Bridge, Backgammon and Cribbage), all taken from the Hoyle series of games.

All the usual bulletin board services and several Chat Rooms, places where groups of people just get together and talk. As a added bonus for TSN users, many of the Sierra staff (including president Ken Williams himself) are often to be found wandering around the network.

TSN has plenty of plans for the future, not least of which is the opening of the world's first computerised theme park — SierraLand. Big name events here include White Water Rafting and a computerised version of every executive businessman's favourite pastime (no ... the other one), Paintball!



TSN puts you in touch with thousands of other users across the country, letting you link up for games of mini golf or Red Baron.

big-name flight sims to feature a link-up option, allowing two budding pilots to take to the air in a state-of-the-art fighter and dogfight until only one was left. Tornado (DI's next release — see Coming Soon in Issue 8) takes the

if senior citizens were not afraid of the computer and use it and be effective with it then it must be a good product, and indeed that seems to be the case."

Sierra plans to expand the network to other countries by 1993, but where is still to be decided. The problem with bringing such a system to Europe is less a technological one than a financial one. Currently, the cost of using a modem is based on the standard telephone charges assigned to normal telephone calls and when you think that you could be spending anything from ten minutes to a good couple of hours up in the air with your friend as a wingman, your phone bill at the end of the quarter could end up reading like Iain Vallance's pay check.

It isn't fair to rule modems or networks out in this country though. Despite the demise of CompuNet there are still a few lights shining for multi-user networks, even if the sources are from the other side of the Atlantic and the Far East.

their homes, as some of them either can't leave their homes or have a very difficult time getting around. Another is that the games we happen to have on-line are very popular games with senior citizens, Bridge, Cribbage, Hearts and games like that. I think it's a combination of both, but I would venture to say that by far the social aspect of the system, not only for senior citizens but for almost everybody, is the main attraction."

In keeping with true Sierra tradition, the whole network has been designed for family use (despite rumours of a Leisure Suit Larry Land appearing in the future). This could be one of the first computing developments that actually manages to bridge the technological age-gaps.

"Ken [Williams] actually recruited primarily senior citizens to test out the network. His mental image of the network was that his grandmother should be able to use it as well as his son. He figured



Serial links:

connection

concept a step further. Developer Kevin Bezzant explains:

"With the Tornado you can have the two principal types — the Air Defence Variant (ADV) and the Interdictor Strike Variant (IDS). So you could have an ADV versus an ADV, which would be your typical dogfight, or you could have an ADV versus an IDS. One player would have a mission to bomb targets

while the other would have a mission to stop him."

The idea of having different types of planes for different players is also one that's being worked on by the American flight simulator specialists Spectrum Holobyte. In this case however, it's slightly more than just two different types of the same plane. Being based on the US military's own

networked training simulators (SimNet), the Electronic Battlefield System (EBS) is designed to allow players with different Spectrum Holobyte simulation to take part in the same battles at the same time. For example, one PC could be running a copy of Falcon 3.0 while another runs a copy of Spectrum Holobyte's forthcoming tank simulator. The EBS allows the two



Null modem cables are available from almost any good computer hardware outlet or, failing that, from most software companies that produce two-player games.



To connect your PC to another simply plug one end of the cable into either your COM1 or COM2 port and make sure the other end is in the same socket on the other PC.



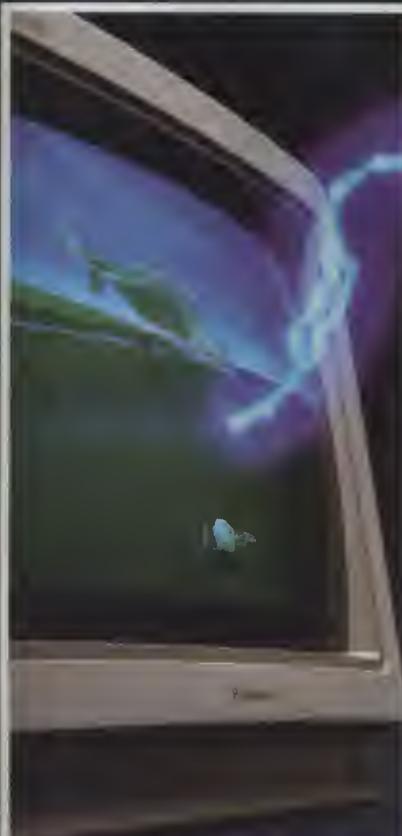
Make sure you get the right size connection for your COM port. Null modem cables normally only fit 25-pin sockets but you can buy a converter for 9-pin sockets.

How to get connected

Connecting one PC to another is simply a case of knowing what you need and where to put it. For standard connections the only lead required is a null modem cable, available from almost any good computer hardware store (Tandy being a particularly good example). Alternatively, you can usually buy one from the makers of the particular game (usually for a much cheaper price), look inside the game's manual for details.

The important thing to consider here is the size of your COM port. Before going out to buy the lead, make a note of how many pins your COM1 or COM2 socket has (depending on which you decide to use) and how many the same socket on the PC you wish to connect to has. It's usually a 25-pin socket but if you have a 9-pin you'll probably have to buy a converter to make it fit.

With the cable in hand, just find the COM1 port on the back of your machine, plug in the lead, do the same with the other end on the other PC and turn on the power. Now, providing there are no flexes hanging loose and you haven't wired it up to the kettle by mistake, your PCs should just boot and run as normal. From there just follow the game's manual to activate the two-player options and away you go.



Populous and Sim City

A long time ago, when Populous was at its height and everyone was looking for ways to improve this superlative game, Peter Molyneux mentioned in passing an idea to link games of Populous with the other big 'God' simulator, Sim City. He has since lived to regret it due to a constant barrage of questions concerning the subject. However, the good news is that a project is currently underway to link the two together.

"We are actually employing someone between our two companies (French developers Maxis were responsible for Sim City) to go backwards and forwards all the time, because we're planning to do it in a really big way and to do a whole line of link-up games."

"It actually went ahead and we had Populous landscape moving to and from Sim City I, but the trouble is that it's such an old title and there are so many nice things you can do with Sim City II, that that's where we decided to pitch the Populous link and that should be out later this year."



Two-player link-up games to look out for:

Digital Integration (0276 684959):
F-16 Combat Pilot
Tornado

Domark (081 780 2222):
Hard Drivin'
MiG-29M Super Fulcrum
Race Drivin'

Electronic Arts (0753 549442):
Populous
Populous 2
Powermonger



Interlocking Game System

Taking a completely different approach to the concept of linked games is Omnitrend's Interlocking Game System. Instead of linking two or more machines together, IGS allows you to link two or more games together to create a much larger environment to play in. There are currently two games available that support IGS — Breach 2 and Rules of Engagement — and while it isn't necessary to have both games in order to enjoy them, linking the two together does give both games a much larger scope.

Breach 2 deals with futuristic infantry warfare and has received critical appraisal across the board. ROE deals with starship combat (along similar lines to the whole Star Trek genre). When alone, ROE's docking and landing procedures would be handled automatically, with Breach 2 added you actually get to control the actions of the away teams.

games to run together, so while Johnny is busy trundling over a bridge in his M1 Abrams, Billy could sweep down in his F-16 and blow it away from under him.

Currently only Falcon 3.0 supports EBS and allows either two players to play against each other or act as wingmen on the same side, or for up to six players to hook up to a network and either play a free-for-all with the last man standing (or flying) being declared

the winner or to all take part on the same side in an ongoing campaign.

Spectrum Holobyte is planning to release further simulators, the next being based on the A10 Thunderbolt and later titles to include Harriers, M1A1 Abrams tanks and AH-64 Apache helicopters, and is hoping to improve the technology to allow for more than just six players at a time. The biggest step that the company wants to take is to set up a global network, with a core computer running an on-going campaign and players just phoning up and logging on with whichever simulation they happen to have.

Where do we go from here?

During a recent trip to Japan, Peter Molyneux stumbled across what he considers to be the future of linked entertainment. "They're building homes now with computers built-in, so that all the homes are linked into a central computer. There's one estate, well it's more of a town, with 10,000 homes all linked together. You can play games with anybody in the place ... it's enormous, really enormous and it's growing."

Are we going the same way? "Unfortunately a lot of this stuff is so techie because there's a lot of people in the professional world that would lose their jobs if it wasn't and I'm sure that it's all designed to be over-techie, and really all that you should have to do with a network is plug a card into your machine and turn it on. Instead it took us three months just to network

up here and even now there are problems."

America has very different views about the future of computerised technology, many of them aligning with the Japanese outlook. "In essence we have that system now with The Sierra Network and we are beginning to have it with the interactive cable systems that are springing up around the world," says Leibowitz. "Things like Mini-Tel in France are certainly adding to that momentum. It's now technically possible, although I think that there are politics and other things involved, especially if you're talking about cabling up neighbourhoods, cities or towns.

"But I think that all of things we now regard as separate, such as television, computer networks, games, movies on tape and so on and so forth, I think that they're all going to merge into one or few unified technologies. So that the same device, whatever you call that device, will be the same one that you watch your television on, order your groceries through or chat to your friends on."

Whatever the future holds, most people would seem to welcome mass networking. People like Walter Gibson and the other Cyberpunk authors have had these kind of visions for years and with every new technological breakthrough, their world of global communication software and alternative computerised environments seems to draw closer. For the time being, I'd be quite content with a ten-player game of Populous.

Infogrames (081 738 8199):

Sim City

MicroProse (0666 504326):

Knights of the Sky



MicroProse Golf

Microsoft (0734 270001):
Flight Simulator v4.0

Millennium (0753 549442):
Global Effect

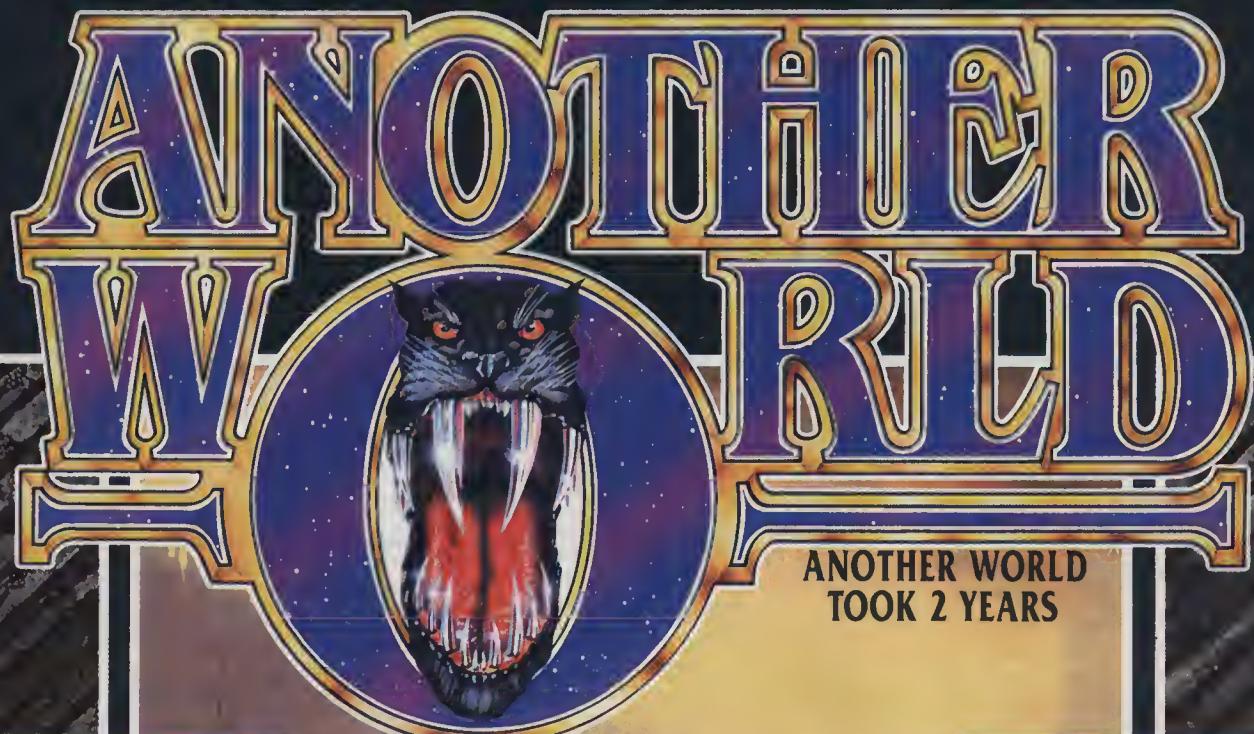
Ocean (061 832 6633):
F-29 Retaliator
Sim Earth

Spectrum Holobyte (c/o MicroProse on 0666 504326):
Falcon 3.0
Super Tetris
Wordtris

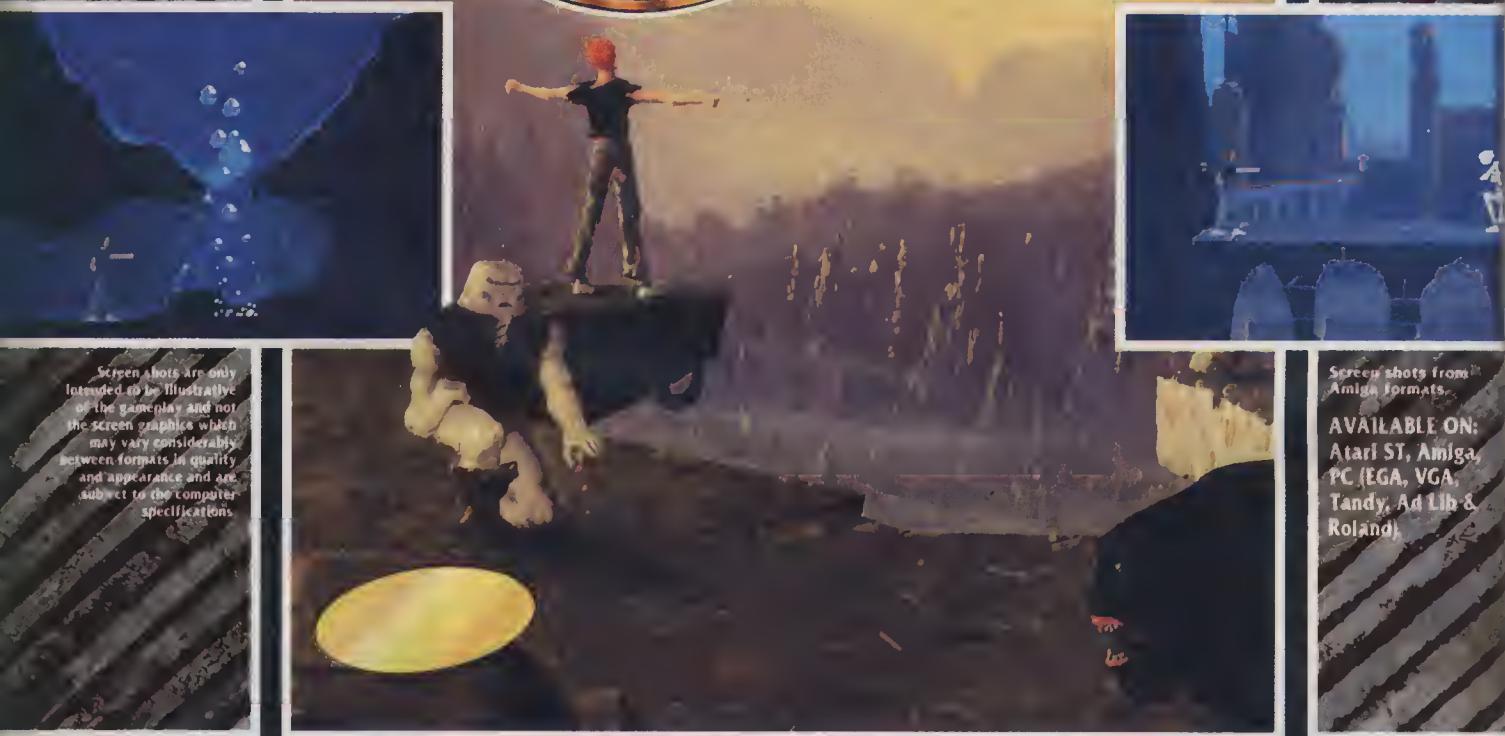


IT TOOK 6 DAYS TO CREATE THE EARTH

ANOTHER WORLD



ANOTHER WORLD
TOOK 2 YEARS



Screen shots are only intended to be illustrative of the gameplay and not the screen graphics which may vary considerably between formats in quality and appearance and are subject to the computer specifications.

Screen shots from Amiga formats.

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Shadowlands – is this really the bright young star of Role Playing Games?

Fans of role-playing games have a treat in store this month as we've reviewed three of the latest and updated our earlier review of Ultima VII. These four games each have a distinctive style, so if you've yet to try an RPG, there will be at least one game here that's right for you.

● Alternatively



We believe games should be placed in context. If you like the sound of Darkseed, for example (see page 50), you'll be interested in other games of a similar style. In all our major reviews, we offer comparisons with other titles on the market, some of which may be more suited to your tastes.



A succinct and precise list of the hardware features required by each game. If you need to know how much hard disk space a game will take up and how many floppies you'll find in the box, this is where to look.

Our no-messing, no-guessing guide to the hardware supported by the game tells you exactly what graphics and sound cards are supported. And if there's anything unusual about the specs, or any additional information, we'll note it along with the hardware requirements.

● Two minutes



The Two Minutes panel is the nearest thing to seeing the game in action, as we take you through selected screens and note the gameplay required.

You'll find our reviews concentrate on the atmosphere generated by the program and the gameplay involved, rather than regurgitating reams about the background story. You can always read the novella when you buy the game – our job is to help you decide whether you want to buy it in the first place.

● Our rating system



We're as fed up as you are of over-complicated rating systems that mark everything from packaging to intro sequences and tell you nothing about the real quality of the game. That's why we've made our rating system simple and consequently useful. We give a single mark out of 10, based on the game's overall quality and how enjoyable it is to play.

You'll find the marks in PC Review are frequently not as high as in some computer games magazines. This is deliberate – not everything is worth the equivalent of 80 per cent. As a general yardstick, anything which gets more than five is, in our opinion, an above average game; seven is good, and eight or over is excellent.

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SOFTWARE REVIEW

- **Shadowlands**
- **Domark**
- **£29.99**
- **(081) 780 2222**

It's becoming increasingly more difficult to come up with original ideas for games these days, with almost everything falling into strict categories and sticking to tried and tested themes, systems and ideas. Face it, can you really tell the difference between flying F117A Stealth Fighter and F15 Strike Eagle II? If you swapped the cosmetics from one program to the other, I doubt you'd find anything different at all.

Role-playing games fare better in this respect, but even these are starting to look stale and uninspired. There are practically no differences in the style of any of SSI's AD&D games and even Origin, the undisputed king of the genre, has fallen into the Dungeon Master trap with Ultima Underworld. You may note that all of the aforementioned titles are American games. There's a reason for this.

Without wanting to blow our own trumpet, there is something to be said for European games designers. We may not be topping the charts worldwide with games such as Another World, Heimdall, Cadaver or Wonderland, but there are very good examples of creative designing. As is Shadowlands.

Freedom to act

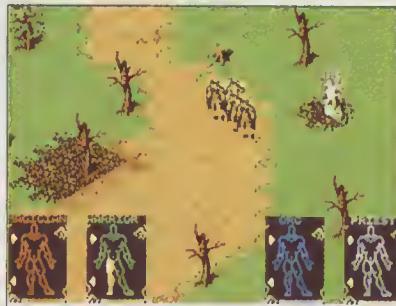
While isometric games are nothing new (the best example previously being Cadaver), Shadowlands takes the basic concept and adds so many new ideas that it is quite simply one of the most enjoyable RPG/adventures to arrive for a long time. I'm actually quite hesitant in using the terms RPG or adventure as it doesn't really fall completely under either banner.

The basic premise is similar to Cadaver, except here you command a party of four characters which (and this is the good bit) can all be controlled individually. Split the party up and have two or more groups tackling different problems at the

This part of the world doesn't often venture into the vastly Americanised market of RPGs, but when we do, we do it with a bit of class

same time, attacking creatures from four different sides, setting up elaborate ambushes: the list is almost endless when all four characters can do their own thing.

If you think this is all a little overenthusiastic, let me explain. The trouble with almost every computer role-playing game on the market is that they have to get over the problem of having multi-character parties being controlled by a single player. The most common way around this is to treat the entire party as a single entity for the most part, splitting them up when and where necessary (usually only in combat situations). The problem then becomes how to enable the player to control all of the characters at the same time easily, the most common solution to which is to freeze time and run the encounter as a series of turns, allowing the player to issue orders to each character, then watch them carry them out. Either that or use the Eye of the Beholder approach where you get a single first-person view and the characters never split up.



Dungeons aren't the only locations found in the Shadowlands. You start in a forest area, complete with trees, gravestones and archards. Later on you'll come to a forest maze, not too dissimilar to Hamptons Court ... apart from the fireball-tossing minotaurs of course.



After a while (and several life or death situations) you'll arrive in an Egyptian-based level. Sarcophagi line the walls, mummies stalk the corridors and the pesky rats have been replaced by pythons.



Further still are the underground caves. This is close to the end of the game and you're likely to come across some of the most deadly creatures here. The firemen are particularly tough, as are the minotaurs wandering around near the exit.

Sha

Now ask any RPG fan and he or she will tell you that you can't beat a bit of creative thought when it comes to solving puzzles or defeating enemies. The trouble is these systems don't allow for that. However, by slowing the pace of the game down a notch or two and allowing the player to have continual control over each character, Shadowlands manages to break free of the mould and offers the player an almost complete feeling of freedom over his or her actions.

There is a down side unfortunately, but it's got nothing to do with the system. The problem lies in the actual puzzles the game springs on you. For the most part they only have a single solution and while this doesn't take anything away from the gameplay it doesn't add nearly quite as much as it could have done.

The Shadowlands system has enormous potential for growth in this area and with time, the designers could create some absolutely stunning adventures and problems with real-



Before the game starts you get to create your party of four heroes. Using a simple identikit system you can rearrange their facial features to completely 'personalise' their look. The 'rogues gallery' pictured here was created in a few of minutes and in all, there are literally thousands of combinations.



Shadowlands

istic solutions and true multiple answers. As it stands, being able to use either a stick or an apple to apply weight to a pressure plate doesn't really count as a multiple solution.

Shadowlands' other brand new feature is something called photoscaping. Essentially this is an atmosphere-generating device, using light sources to create realistic shadows and surprisingly enough it works. It's all too easy to instantly dismiss a game that boasts a brand new gaming system with a fancy and marketing-created name on the cover blurb, but photoscaping really does add a new dimension to the game, making those tense moments of danger even worse when your torch suddenly flickers out and you're left fumbling in the dark.

The light fantastic

What's even nicer is that the designers of the game haven't just left it as a fancy mood-setting device. Light plays a very important and realistic part of the game (you can't read signs on the

wall without something to see by), and is the focal point for more than one of the more fiendish traps and puzzles. There's also a very nice routine built into the program that causes certain monsters to be attracted to light sources (rats for example) which can lead to some very interesting circumstances. This also allows you to get clever in the way you dispatch them; guiding a zombie towards a couple of pits then throwing the torch on to the far side and watching him fall to his un-death.

Speaking of rats, Shadowlands contains one of the most irritating sets of monsters ever to appear in a computer game. Namely, the bad guy that can't be killed. It starts with rats, but on later levels can take the form of snakes or scorpions. Whoever came up with this idea for these minuscule monsters that are too small to hit but will quite happily follow you around nibbling away at a hit point here and there has possibly the most sick and twisted mind I've yet to come across in the world of computer games (you know who you are). One was so per-

sistent he even followed us through teleporters in order to deliver that fatal bite.

To be honest I think this feature has been slightly overused. Introducing the pesky varmints at a later stage than level one and not including quite so many of them would definitely have been a step in the right direction and would have caused at least one less case of a heavy object being hurled violently towards the monitor.

Generally speaking, combat is a well balanced affair, occurring just often enough to generate excitement and lift the pace, but remaining infrequent enough to keep from being the centre of the game. You don't get a lot of control over a character's actions, merely putting a weapon in his hand, pointing him in the right direction and saying "Kill", but it's all the game needs. Because you can control each character individually, you can set them up to attack from different directions or you can have one character keeping the hordes at bay while your wizard runs around the back to cast a fireball. Because the system is so easy to use, you can employ almost any kind of strategy you wish.

An age old story

But I've barely touched the objectives of the game and while this isn't always as important to an RPG as the actual gameplay, the storyline is quite an important part of Shadowlands's overall feel. It's quite similar in content to the plot of everyone's favourite underground explorer, Dungeon Master. You are killed when an army of foul things and horrible whatsits come pouring out of the Shadowlands of the title, slaughtering everything in their path. Your spirit lives on, though, and is determined to get revenge for the foul atrocities committed against your people and your wife (you were a royal prince).

You do this by influencing the minds of four local adventurers and guiding them into the Shadowlands to find your bones and place them on some altar of life, or something. This is a clever way of saying you control the four heroes.

You start on a forest track, presumably just on the edge of the Shadowlands themselves. This 'level 0' allows you to get the hang of moving around, picking up and manipulating objects and to generally get used to the controls. There are no bad guys around, plenty of apples to stock up on, a stick or two and even a bow. There are also a couple of ravens flitting about to practise your swordsmanship on (or wooden stickmanship as the case may be), should you feel that way inclined.

One thing you may notice while wandering around the forest area is that the statues you pass occasionally turn into thin

red lines on the ground. Don't worry, this isn't a bug, instead a rather clever system for enabling the player to see what's going on at all times. The thing about isometric games is that when a character goes behind a wall to his south, the player can no longer see him or what's happening to him. What Shadowlands does is to replace the vision-obscuring walls, doors or items with thin red outlines. You still get to see where the walls are, light still reflects off them, objects still bounce off them, you just can't see them. This can be very handy in restricted areas, especially when there's a lot happening at once.

Another clever use of vision is the line of sight each character has. At least it would have been clever had it remained true throughout. The basic principle is that if you move the cursor out of the character's line of sight he won't perform the function. Set a character to move, then put the cursor behind a wall and he won't go anywhere. This is supposed to represent your influence over the character's will, stray too far away and you will lose your control.

The whole line of sight thing falls down when it comes to the actual intelligence of the characters. Tell them to walk from A to B and they'll do just that. If a C (such as a tree stump or a wall) happens to be slap-bang in the middle of the two, they'll walk straight into it and refuse to go any further, causing you to guide them around the offending obstacle. This is particularly annoying when you're trying to avoid pits, get a party through a narrow doorway or dodge a series of fireballs. Even with an outside force controlling their minds, you'd expect them to have a little bit of common sense.

Making your hapless (and so it seems witless) band of troopers perform actions is a lot simpler than you'd think for a game that allows you to do so much. Each character has an individual 'portrait' along the bottom of the screen, showing an outlined impression of his body. This is split into five areas – the head, both arms and both legs – each of which performs a separate function appropriate to that particular appendage.

The head, as you'd expect, is used to eat and drink items and to read signs, scrolls and parchments. The arms are used to pick things up, use objects and throw things (with particular items displayed in the 'hand' area of the portrait), and the legs are used (surprise, surprise) to move around. The right leg just moves the one character, while the left acts as a 'lead' leg, commanding the other characters to follow the selected one like sheep (more often than not to the slaughter).

You may find it needs a little getting used to (the amount of times I confused the functions of the right side with the left side were innumerable), but thanks to the unhurried pace of



TWO MINUTES OF INDIVIDUALISM

We join our heroes as they ponder a tricky problem, how to get past these pits. That pressure plate might be the answer.

Hurling a stick over the pits lends just enough weight to trigger the pad and remove the central pit. A spot of careful negotiation and we're through.

A sign on the wall reads 'Watch your step'. Carefully we make our way along the edge of the wall, with the torch carrier leading the way.

A light trigger! Thanks to the light from the torch, we've revealed the pits to the east. In single file we make our way past them.



Photoscaping at work

What photoscaping does is provide a realistic use of light and light sources throughout the game. Without any light sources activated a dungeon

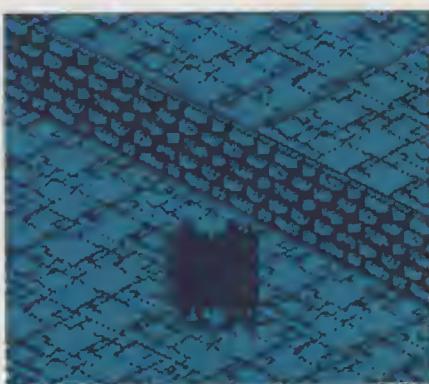
area will be in darkness (pic A). Light a fresh torch and you'll see the light spread out from the centre, growing dimmer as it reaches its limits (pic B). As you move around, the light 'bounces'

off walls, doors and the like, curving around corners or through doorways (pic C). Gradually the torch will burn down and the area of light will decrease (pic D), until it finally burns out completely and you'll have to relight another torch or find a different source of light.

Apart from aiding vision, light plays a key factor with some of the monsters and traps that are pitted against your motley crew. Hanging from

walls at key points in the dungeons are light 'receptacles', triggers that activate certain events when a light source comes into contact with them (such as opening pits or closing doors). It's a fairly simple concept but they do mean that the game's

developers can design some pretty crafty problems for the player to solve. For example, a pit blocks your path with a sign that says 'Cast some light on the problem'. Out of the sight, way down the corridor beyond the pit, is a receptacle that will close the pit when triggered. But how to trigger it? A torch will only reach so far and even throwing it doesn't make the distance. But a fireball spell (which also provides a source of travelling light as well as being a devastating weapon) would travel far enough.



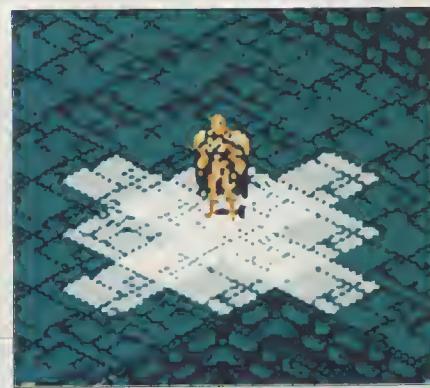
A



B



C



D

the game it's not usually a problem. It is one of those irritating small features (along with the aforementioned rats and unintelligent movement paths) that virtually every game has.

Another irritating feature that were probably good ideas on paper was the object rotation process. In layman's terms, when you access your inventory screen you can place objects in the 16 slots in whatever order you like. By using the two arrows on the character portraits you can rotate through the objects in the order you set them up, until the desired object is in the character's hand. Unfortunately it's very easy to lose track of what object was where and you rotate through endless of useless items until you get to the one you want. Again, this is a minor irritation unlikely to affect the game in any major way, but it still niggled and could easily have been improved.

At an RPG's heart

Every role-playing game set in a fantasy genre has to include magic. A good magic system can transform a fairly average game into something worth coming back to. In my mind Dungeon Master still has one of the best magic systems ever to appear in a computer game and while Shadowlands doesn't come close to touching it, it does contain several really nice ideas.

The first of these is the use of magikforce (sic). Every object contains an amount of energy that determines how powerful it is. A sword with an MF of 67 is more effective than one with an MF of 12 (to quote the manual for a moment). What's really nice about this is that wizards and magicians can drain objects of MF in order to beef up their spells. A fireball scroll that's just

With nothing else to hinder us, we make it down towards a couple of skeletons. After a quick thrust and parry they drop a key.

Making our way back past the pits we arrive back at the top where the skeleton's key opens the locked gate. Carefully we push on.

Two pressure pads stand in front of the gate and need considerable weight to trigger. Two characters on each should do it.

Damn! The two guys on the southern pad were teleported into a rat-infested cell. Guess it's up to the other two to find a way to rescue them ... and quick!

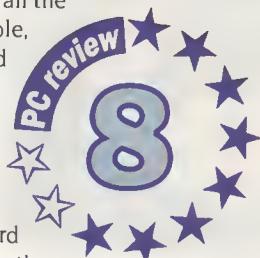




The inventory screen offers more than just a list of possessions. You can set up group formations on the chess boards, eat, drink and sleep, drain magical energy from abjects and even set up an equipment rotation.

been used is no use to anyone, but all the wizard has to do is take, say, an apple, drain 50 points of MF from it and transfer that energy to the scroll. Hey presto! A brand new fireball spell. Of course, the apple is now probably no use to anyone and would barely contain enough nourishment to be an effective guard against hunger, but that's the choice the wizard made. This means that you have to be careful about what you drain and what you hang on to. It's all very well having a dozen fully charged scrolls at hand, but if that's left you with hardly any food, you're in trouble.

The other nice touch with the magic is the way spellbooks are used. You start with an empty book containing six slots. Whenever you come across a scroll you can add it to the book in the order that you wish to cast it (similar to the object rotation of the inventory). This means you would be able to cast six spells from a single book before you then have to select another piece of equipment to use – this is all very handy when you become embroiled in tricky combat situations. And that is the core of Shadowlands' appeal. The designers have made every effort to make the game accessible, friendly and enjoyable and while not every area has worked as well as it could, they got all



REQUIREMENTS

Shadowlands doesn't ask for much in the way of hardware, but will quite happily absorb whatever you throw at it. Having said that, I would recommend a VGA card as EGA looks pretty dreadful. Sound doesn't play too much of a part in the game (the only music coming in the intro and the end sequence) but whatever soundboard you can offer does add to the atmosphere. Memory restraints are pretty minimal (I've had no problems at all on many different machines) and you'll need less than 1Mb free on your hard drive.



ALTERNATIVELY...

Eye of the Beholder

SSI/US Gold, £30.99

Although it turned quite a few heads in its day, SSI's sojourn into the world of 'popular' RPGs is beginning to look a little dated and unless some serious work goes into the third release in the series, it's likely to start receiving the same sort of criticisms that are being levelled at the standard range of AD&D games.

Compared to Shadowlands, Eye really comes in for some stick. The first-person perspective genre is hugely popular with a wide body of people (especially with the recent release of Ultima Underworld) but Shadowlands is just the kind of game to win back some of the 'floating voters' and even cause a few defections.



Ultima VII

Origin/Mindscape, £39.99

Origin's flawed masterpiece has a lot going for it (the strength of the previous titles) and a lot against it (horrendous bugs). To be fair to Origin, it has tried to produce something really special for this supposedly final trilogy in the series, but the end product looks over-stretched and isn't nearly as enjoyable as The Savage Empire.



Storytelling has always been Origin's strongest suit and Ultima VII is no shirker in this department. Ritual serial killings, drug problems, important social issues and developing societies – Ultima VII tells its story with ease and clarity and you're never at a loss as to what's going on. Unfortunately it just isn't as friendly as Shadowlands and the bugs are enough to turn anyone away.

Cadaver

Renegade, £35.99

Cadaver is possibly the closest thing to Shadowlands on the PC (with the possible exception of Legend – see below), but with only a single character to control and a much stronger puzzle element, it's reminiscent of the age-old 8-bit classics such as Head Over Heels and Batman.

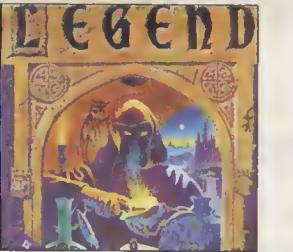


Shadowlands is a superior game, there's no doubt about that, but Cadaver has quite a following and shouldn't simply be ignored. It has a lot to offer and with Cadaver – The Payoff almost upon us, is likely to remain the strongest alternative choice to Shadowlands.

Legend

Mindscape, £30.99

For full details on Legend see the review on page S4. But in a nutshell, Legend is more like Cadaver with four characters than a cross between that and Shadowlands. It doesn't quite have the same feeling of excitement and atmosphere and doesn't feel nearly as 'realistic'.



It's certainly not a bad product but as to whether you'd choose it over Cadaver depends on how much you like the feel of owning an older classic. As to whether you'd choose it over Shadowlands, it's really only worth it if you want to own both. Shadowlands is the better product.

the important areas right. Shadowlands deserves to do as well as Ultima VII, Underworld or EOTB II and if there's any justice it will do. Once again the creative talents of European designers has certainly paid off.

THE PERFECT GENERAL



Based on a twelve year old tournament series, the game includes a highly refined yet very intuitive playing system

- Gorgeous playing field and landscapes
- Clean and simple interface
- Three difficulty levels
- You control every move and fire of your forces
- Superior artificial intelligence
- One or two players, human or computer, plus play by modem
- A wide range of intriguing scenarios
- The thrill and sounds of artillery, tanks and infantry in action

"The Perfect General"
computer game is IBM PC
and Amiga compatible

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Saddlers House
100 Reading road
Yateley Camberley
Surrey GU17 7RX
Tel (252) 860 299



SOFTWARE REVIEW

■ **Indiana Jones and the Fate of Atlantis – the Action Game**
■ US Gold
■ £29.99
■ (021) 356 3388

Indiana Jones and the Fate of Atlantis



TWO MINUTES OF GAMBLING

The very badly drawn intro sequence outlines Indy's latest and most dangerous quest – the search for Atlantis.

Indy starts off in the casino, and since he's a born gambler, he purchases some chips and heads for the tables.

By pressing the switch character key, you can move to Sophia and try to get her to join Indy so she can help him in his quest.

As in his previous adventures the Nazis are Indy's arch-enemies, and the casino is crawling with them...



Indiana Jones faces his toughest assignment yet – to find the lost kingdom of Atlantis and stop Nazis and alien hordes from conquering the world



The use of colour in the game is a little disappointing, tending to be dull and drab, not adding any sparkle to the play.

out with the baddies and solve various problems.

In the upper right-hand corner is the health meter, which shows how badly wounded either character is, while the compass opposite shows the direction of the exit from the level. The timer is also situated on the left hand side and comes into play when various time-sensitive stages are reached.

The selected character icon, located at the bottom left-hand side of the screen, allows you to switch control between Indy and Sophia whenever you want, while the other character status is at the very bottom and depicts the health of the character not under your control.

Finally the inventory, at the bottom right, shows what items are currently in use by your main character. This also contains various icons that represent basic commands, such as stop, go, eat and so on. The inventory also allows Indy to wield various weapons and use any other objects he has found.

You can move the characters about by using either the mouse, the joystick or the keyboard controls. Personally, I found it best to use the joystick as Indy tends to be quite mouse-sensitive. You can get him killed off very easily by accidentally moving the mouse a couple of centimetres too far in the right direction. That said, the keyboard controls are more than adequate and the programmers have had the foresight to include a function that allows you to change the game's default settings. I found this a godsend when using the keyboard, as the game's original control didn't suit me at all.

A word of warning, though. Be very careful when changing

US Gold hasn't been slow to capitalise on the popularity of Indiana Jones and his computerisation, courtesy of Lucasfilm. The last two Indy films have been rendered as 'adventure' games (Lucasfilm's) and 'action' games (developed by Attention To Detail for USG). However, just as the James Bond film-makers have pretty well run out of Ian Fleming stories to adapt, so Lucasfilm and USG have exhausted the Indy film archive. Hence Fate of Atlantis is based on an Indiana Jones comic book story. This is the action game – Lucasfilm's adventure won't be out for a while yet.

The game begins in 1938. Indiana Jones has discovered two artefacts – a minotaur statuette and a mysterious bead – which he believes will eventually lead him to the lost city, Atlantis. Unfortunately for the intrepid Indy, these artefacts are stolen from him by a mysterious thief.

While he tries to track them down, Indy discovers that a close friend, Sophia Hapgood – a psychic specialising in Atlantean lore – has also had various Atlantean artefacts stolen and it appears someone also wants to find the fabled city of Atlantis – and fast.

After hearing that a certain casino owner in Monte Carlo has 'acquired' some new Atlantean relics, Indy, accompanied by Sophia, makes his way to the Mediterranean principality and this is where the game proper begins ...

Keeping Indy under control

The screen is divided up into eight different areas, all of which have to be checked regularly. The action screen is the largest part of the display and this is where Indy and Sophia fight it

Even the Nazis however are no match for Indy's bullwhip. Knock them out and they occasionally drop useful items.

There are more goodies to be had in the green caskets to be found lying around on all the floors of the casino.

Once you've won enough money, go to see Monsieur Trottier and buy some equipment from him with your winnings.

If both Sophia and Indy get caught by the Nazis at the same time then I'm afraid you really have had your chips.



these settings, as I found several of my selections reacted with some parts of the game in such a way that I couldn't continue the game and had to re-boot the game from scratch.

Once you have mastered moving Indy about, which takes some time, you can proceed with the game. Initially, Indy and Sophia are located at different parts of the casino and your first task is to get them together. By switching between characters, you can work out where they are and get them to join up. As you move Indy and Sophia towards each other, they are accosted by various baddies. At first, Indy can only use his fists or his whip to defend himself - while Sophia delivers a particularly nasty-looking kick - but as the game progresses, various weapons and implements become available.

If you control Indy well, he will knock out his opponent. It is worth noting, though, that your opposition is never killed and an unconscious enemy will soon recover and begin attacking again. Sometimes a defeated opponent will drop useful items, which can range from chocolate to money. For the record, eating chocolate restores Indy's energy, while money enables you to bribe people or gamble.

Gambling plays a major part on the first level. The casino's roulette tables are rigged and you need a lot of money to strike the best deal with Monsieur Trottier, the casino's owner, for the artefacts and weapons he can supply you with. The knack is to crack the system and bankrupt the house. It can be done.

Communication breakdown

Communicating with the game's characters is handled in a very strange way indeed. When characters 'speak' to you, their messages appear in the form of icons which you then have to translate using a chart. These interruptions spoil the atmosphere of the game somewhat, as a character may say "+" and you have to consult the rule book to discover it could mean "Sorry this table is closed".

I assume must that including this is meant as a device to stop the pirates, but it seems rather elaborate, as the initial protection seems good enough. The code wheel supplied with the game is printed on jet-black cardboard and uses even blacker figures! I found them really difficult to see and had to resort to reading them directly under a bright light. Photocopying them would be next to impossible.

Once you have all that is required and found a way out of the casino, you move off to level two which is set in a Nazi-controlled naval base. The aim here is to get both Indy and Sophia inside the perimeter fence and find the hidden entrance to the secret submarine base. This sounds much easier than it really

When faced with a tricky situation it is often worth the effort to watch the demo version of the game. Clues or solutions to particular problems to some problems can be found there.



ALTERNATIVELY...

Indiana Jones and The Last Crusade - the Action Game

Lucasfilm/US Gold £25.99

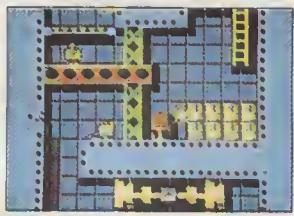
Similar to Atlantis, but with less puzzle solving. Indy has to find the Holy Grail and on the way he punches and whips several hundred evil people to get there. In this version Indy is quite hard to control and he tends to get killed on a very regular basis, which does spoil the fun somewhat. Like Atlantis it is very fast, furious and frantic, but it is also a lot of fun and well worth checking out if you like to be kept on the edge of your seat. This was the best of the Indy computer games until the Fate of Atlantis came along.



Rick Dangerous 2

Kixx £9.99

Although more of a traditional platform game, it has enough similarities to warrant a comparison. After defeating the Gollutribe and a bunch of Nazi agents, Rick returns to try and save the world from the evil devices of the Fat man. To do so he has to overcome a plethora of ladders, traps, secret switches and remote control guards as well as travel to the ice world, a forest and atomic mud mine! With slick graphics, quick-fire action, great atmosphere and tons of pressure, Rick Dangerous will have you ducking and diving in front of your monitor, while breaking out into a cold sweat. Highly recommended - one of the best action games on the PC - and yours for less than a tenner.



is: you have to manoeuvre Indy around a series of guard towers which house powerful spotlights. If any of these beams hits Indy, he gets caught in a murderous crossfire which drains his energy at an incredible rate.

You also have to fight a huge number of guards, pick up several items and crack a code to finish this level. In fact, searching for items plays a big part in this game because obtaining certain objects - maps, passes and wire-cutters to name but a few - is essential if you want to finish the game.

This leads you to the third level, which requires different skills to complete. There is no combat here, but you still have to think on your feet and react with lightning speed as it is against the clock. The idea is to get Indy and Sophia on the submarine by using a loading crane - and this is really tough. You have to make both characters jump, grab the crane and

Life's a gamble and Indiana Jones is always willing to play the odds. Here Monsieur Trottier, owner of the Monte Carlo casino, sits in his office, growing fat on the profits from his rigged games.





The game action can be viewed from four different angles, allowing you to gain a comprehensive knowledge of the area you are currently exploring.

then judge when they should drop on to the submarine, which is rapidly departing, all within a time-limit. Once on the sub you are ready for the next level. The Nazis know you are aboard and have booby-trapped the conning tower, so disarming the bomb is a must. Added to this problem, you have to deal with a Nazi armed with acid bombs, take control of the sub and steer it to a group of Greek islands.

The final part of the game is really action-packed. By now you should have gathered enough information to know under which island lies Atlantis. To make things difficult, all the islands seem the same and are inhabited by hostile natives. Once in Atlantis you have to conquer scores of Nazis while at the same time learning how to activate various machines which will enable you to enter the island's interior.

Here there are literally hundreds of aliens to combat and plenty of puzzles to solve. Hopefully you will be able to put a stop to their plans of world domination!

Frantic manipulations

Atlantis contains the right combination of action, strategy and discovery to make the game highly playable. The scrolling is particularly excellent and both characters move about the screen in a fluid fashion. Admittedly, it does start off rather slowly and gambling at the casino soon loses its appeal, especially when you have cracked the system. However, once the game gets going you find yourself embarked on a tense and exhilarating journey through the different levels, always either fighting something, trying to beat the clock or frantically manipulating the controls to keep Indy and Sophia alive.

I also liked the way you could arrange for your 'other character' to act totally independently. While you are busy controlling Indy, you can get Sophia to explore a large area under her own initiative and if she gets in trouble – indicated by a change of colour in the other character status chart – it is just a simple matter of clicking on the switch character option for you to gain control her again and deal with her plight.

It is worth noting that Indy and Sophia never actually die. If Indy is unfortunate enough to get beaten to a pulp, he is whisked off by the Nazis and held hostage, allowing you to take control of Sophia. With her, you can try and rescue him and if you are successful you can use Indy again to play the game. Nevertheless, if Sophia and Indy are both captured the game is over, as it is if you fail to complete one of the time-sensitive sections within the given time.

You can get some good hints and tips on how not to get captured if you watch the demo which follows the opening title sequences. Some real little gems of information are revealed if you can be patient enough and sit through the whole showing. I found a whole host of secret doors, combat techniques and other information just waiting to be divulged. Indeed, I found it

good practice to go back and look at the demo again when I became stuck at a particularly difficult stage of the game, and it actually helped me out of tight spots on several occasions.

Saving the game regularly is a must. Unlike other action games, you have the ability to save the game where you want, and not just at a specific point such as the end of a level. Also, by just slowly wandering around, you can see certain Nazis only patrol a given area, and it is possible to avoid them by planning a route around that area. Playing a few times from a saved game and experimenting by trial and error will help you out in the long run and save Indy from losing any more of his much-needed energy than is absolutely necessary.

Another nice touch is the ability to view the gaming action from any of four angles. Using the cameras – which are placed north, south, east and west of any action – you get a better idea of the areas you are exploring. The change of view is also immediate, so you don't lose out if Indy is involved in combat. It also helps when your character gets involved in a fight in an area which is partially obscured by walls and the like, as it gives you an absolutely clear view. This facet sometimes reveals objects and doorways that you might otherwise miss.

Again, unlike some action games, you cannot overlook an object that you need, as they are all contained in little bright green chests which stick out a mile. Using the items is simplicity itself: select an item from your inventory, stand Indy in front of the place or thing you want to use it on and Indy automatically does the rest.

On the negative side, the game's graphics are pretty ordinary and nothing to get worked up about. The colours used throughout the game also tend to be pretty drab and do nothing to enliven it. But these few negative points are vastly outweighed by the positive because Atlantis is an exceptionally well-balanced game, with true depth and variation.

It was also nice to see that the puzzles contained in the game were logical and not overly complex as in some adventures. This, coupled with the fact that the game unravels itself at a decent rate, maintains the interest within the game. You soon get to know that top nazi spy Klaus Kerner has stolen all the Atlantean artefacts for Dr Hans Übermann, who believes that the artefacts contain an energy which he can harness for the Nazi cause, and it is clear that Indy has to stop him!

Atlantis demands a combination of manual dexterity and puzzle-solving and, while it is difficult to finish, it is highly addictive. If you like action and problem solving in the same package, then Indiana Jones and the Fate of Atlantis is definitely the game for you.

WAYNE LEGG



REQUIREMENTS

The game requires 512K for the VGA and EGA versions, while the MCGA requires 640K. Either a mouse, keyboard or joystick can be used for this game. I would recommend a joystick, as controlling the characters with a mouse is quite tricky.





SOFTWARE REVIEW

■ **Darkseed**
 ■ **Mirage**
 ■ **£39.99**
 ■ **(0260) 299909**

Most people will be familiar with Giger's work through Ridley Scott's classic science-fiction thriller *Alien*. But Giger's art transcends the merely horrific; his unique works embody all aspects of the human subconscious, from our worst nightmares to our darkest desires. The images Giger generates are, at one extreme, strangely abstract, and at the other blatantly erotic, some would say pornographic.

Looking at these depictions of phallic symbols, distortions of natural shapes and biomechanic symbiosis, can hardly be called a pleasant experience; these pictures strike too many raw nerves for that to be the case. The truth is that art of this nature forces the viewer to respond violently; it is impossible not to react with disgust or empathy, or pleasure. The games that the art of Escher plays with logic, are played by Giger on emotions.

The plot thickens

But what, you may well ask, has all this got to do with computer games? The answer is Darkseed, the creation of American development team Cyber Dreams, which uses Giger's artwork extensively. In a time when every graphic adventure released on the PC seems to be comic (witness Sierra and Lucasfilm's games), it is refreshing to see a company taking the plunge and producing one with a serious plot. And you can't get much more serious than the plot of Darkseed. It develops like a cross between *Alien* and a Michael Crichton novel. Protagonist Mike



In the 'real world' artwork exaggerated perspective is used to very good effect, as can be seen from this shot of the front of the house.

The macabre art of Giger provides an atmospheric background in this most unusual of graphic adventures

Darkseed

Dawson, who coincidentally looks exactly like his namesake, Mike Dawson the game designer, buys an old Victorian house in a strange and hostile neighbourhood. While taking a nap in the house he has a bizarre nightmare in which an alien embryo is implanted within his skull. He wakes with a splitting headache and over the next few days his dreams and headaches become increasingly severe. Realising that something is very wrong, his only hope is to find the meaning behind his dreams and destroy the source of his headaches. Enough to give migraine sufferers sleepless nights for months, isn't it?

Twin worlds

If you've read any of the publicity that Darkseed has had to date you'll know that the answer lies in the existence of a parallel world. While even the 'normal' world in Darkseed is a little odd, what with its strange goings on and distinct lack of people



TWO MINUTES OF CLUE HUNTING

One of the first clues you find is the note on this mirror - why had it been put in the garage?

The house plans that have been conveniently left in the study show that there is more to the place than first meets the eye.

Things certainly take a turn for the worse when the postman delivers a macabre package to you.

Stepping outside you come across a discarded newspaper. It confirms that something is amiss.





or human activity, the parallel world, which is the one based on Giger's artwork, is even more bizarre, populated as it is by unhealthy looking alien creatures and intelligent combinations of flesh and machine. The Giger-generated world is monochrome because Giger insisted on his art being rendered in a high resolution mode. This does of course mean that only VGA owners will get to sample the delights of Giger on screen. The lack of colour is no great loss since much of Giger's art is either monochrome or painted in very subtle shades, and in fact the sombre look actually suits it.

The 'real world' art is a little more colourful although it still has a slightly hazy, 'unreal' look about it. Unfortunately all of the digitised sprites, especially the main character, are extremely crisp, and when they are set against the softer backgrounds they have a very two-dimensional cardboard cut-out look to them. This is made worse by the very stiff and stilted animation.

The worst offender is the central character who, much of the time, looks like a mindless robot. Cyber Dreams would also have done well to take a leaf out of Lucasfilm's book and give the main character something to do when he isn't being moved. To see him sitting down and having a drink or contemplatively picking his nose would have been better than just standing like a lemon staring into space.

It's hydromatic, systematic ...

A definite plus point is the control system; it's simple, but effective. All functions are achieved with the mouse. Normally the cursor is an arrow which can be pointed to any location on the screen to make Dawson walk there (if he can reach it). When it passes over an exit the cursor changes shape to show that the screen can be left at this point. Clicking the right mouse button changes the cursor to a hand and the function to get/manipulate object. Whenever the cursor passes over an object that can be taken or manipulated it changes to a pointing finger. This makes it very easy to identify items which are only there as part of the background. Clicking the right mouse button again changes the cursor once more, to a question mark this time, and the function becomes examine. Once again the cursor changes shape, to an exclamation mark, whenever it passes over an item of interest.

The inventory is shown as a strip of icons which drop down whenever the cursor is moved to the top of the screen. These can then be held by changing the cursor to a hand and clicking on the desired object, which is highlighted. Some objects, when collected, will cause the game to cut to a close-up view, especially when there is something to be read.



Each night, after Dawson goes to sleep, he is subjected to strange dreams which provide eerie clues as to his predicament.

A library book has been reserved for you and it makes fascinating, if rather chilling, reading.

The library also holds another clue - this time hidden in the stacks of books on the shelves.

Robbing the dead is not usually your style, but your grave situation calls for desperate measures.

The clues so far have been a little helpful, but there's still no sign of an answer. Maybe new neighbour Delbert can help.





In the dark world you have to find alternative means of getting from one location to another. This one is particularly stomach churning.

Players who don't possess a mouse (why, when they are so cheap now?) can emulate it using either a joystick or keyboard. Both of these are fairly slow and clumsy ways of going about things, although the game is still playable in both cases.

As far as interacting with other characters is concerned, there is no 'Talk' option as such, although they will speak to you if the need arises. Speech is available on both Ad Lib and Sound Blaster (which are the only sound cards supported), and also through the standard PC speaker. The quality of the speech through the latter is surprisingly good, clearer in fact, than it is through the Ad Lib card, although Sound Blaster owners inevitably get the best deal. Even using a hard disk there is an annoying pause while each bit of speech is loaded, so you always know when someone is about to speak to you. Both worlds actually operate in compressed real time, so shops open and close, people move about, and days pass whether you do anything or not.

Save your soul

Once you've done everything you want to do on a particular day you have to go back to the house and go to sleep. While you sleep you dream about the strange aliens again and this is shown in a monochrome animated sequence. The manual advises that the game is saved often, especially at the end of each day, in case you need to go back and do something on that day.

Saving and loading games is a very simple affair, achieved via an icon on the inventory strip, and you can save as many games as you wish, each with a unique filename. I would reiterate the need for frequent saves; this is not one of those games in which you can't die, and it is also very easy to go down a metaphorical 'dead end' from which there is no way out bar loading a game saved earlier.

This is the sort of adventure that you will have to play through several times to make any progress, rather than the type in which you will be stuck in a particular spot for a long while. You are playing within a severe time limit. If you don't achieve every necessary objective within a few days the creature within your head will be born and the game comes to an end. In fact timing is ridiculously critical throughout and frequently the only way in which you find out you have neglected to do something vital is when the game comes to an unexpected end and you are forced to play through from the beginning, usually with very little idea of where it is you've gone wrong.

The difficulty is that many of the problems are so disjointed and obscure that only luck will really lead you to the answer, and this problem is compounded by the fact that a couple of



ALTERNATIVELY...

Altered Destiny

Accolade, £34.99

Another graphic adventure in which the hero is unexpectedly thrown into another dimension, on this occasion through a strange television set. Altered Destiny is a far more colourful and lighter in plot than Darkseed and certainly easier to complete, so it will appeal to those who find Darkseed's plot a little too sombre, or who don't like the idea of tackling such a tough adventure.



Heart Of China

Dynamix, £39.99

If it's spectacular graphics and sound you want then you can do a lot worse than taking a look at this and *Rise Of The Dragon*, both of which combine stunning visuals and complementary music and sound effects with a reasonable degree of playability. Both adventures convey a strong atmosphere, but some players may find them a little too linear.



the objects you need to find are so small that they are virtually indistinguishable from the background artwork, making it all too easy to overlook them.

With the exception of the poor animation I mentioned earlier, the game's presentation is generally very good. The 'real world' artwork is well drawn with some excellent use of exaggerated perspective and the 'dark world' artwork is a real treat for Giger fans. What is noticeable is that, despite the fact that this is a very adult adventure, Cyber Dreams has avoided using any of Giger's more sexually provocative pieces. The soundtrack leaves a lot to be desired. Although it vaguely fits the mood of each scene it sounds too much like supermarket muzak in places and it is far better to switch it off and have just the sound effects working. Incidentally, it is not a good idea to switch sound effects off because they give vital clues at various points in the game.

All in all, Darkseed is a brilliant idea which hasn't really been done justice. This is a shame because Cyber Dreams could have had a best-selling, award-winning adventure here. As it is, it's a must for Giger fanatics and a definite 'maybe' for hardened adventure players, but anybody looking for a first graphic adventure game or wanting something that is entertaining without being too taxing had better look elsewhere.

LAURENCE SCOTFORD



REQUIREMENTS

Darkseed comes on five high density disks, takes nearly half an hour to install, and will use up just short of 10Mb of your hard disk space. You'll need at least 580K of free base memory to run it.



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SOFTWARE REVIEW

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Legend

Bloodwyche made its debut on the Amiga and Atari ST over three years ago, receiving widespread, though not ecstatic, acclaim. At the time it was overshadowed by FTL's excellent Dungeon Master, despite its impressive first-person graphics window, excellent character selection screens and decent presentation.

The major difference this time round is the graphical viewpoint. Legend combines a group of beautifully drawn still-graphics screens with an isometric 3D display in the dungeons. There is also considerably more depth and variety in the gameplay, tougher (and more) monsters, and plenty of complex puzzles to keep you scratching your skull.

In fact, the only thing that the two games do have in common is the plot. Both are set in the land of Trazere, and feature the town of Treihadwyl as the focus of the action. In both cases evil forces are corrupting the peoples of the ancient realm, and engaging in a laugh-a-minute orgy of destruction, carnage, and general impoliteness. The four keeps in the kingdom can't hold out against them for long, so four heroes have spontaneously decided to gang up on the baddies and offer resistance.

And that, refreshingly, is just about all the manual offers you by way of background information. However, there's a lot more to the game than ridding the land of evil, as you soon find out. Once you've selected your characters (see the panel on heroes and heroines), the land of Trazere is laid out before you, on the main map.

There are plenty of interesting places to visit, including the king's palace, which you need a permit to enter, the dark tower, which similarly can't be breached until you learn its name, the constantly elusive unshrine which disappears as soon as you

The long-awaited sequel to Bloodwyche is here, although the two have little in common



The enemy forces are directed from the Dark Tower; but you need to know its name before you can enter.

approach, the towers, where you can buy horses to help speed your progress around the map and pay for new soldiers to defend Trazere, fields where you encounter the enemy in surprise battles, the Ancient, who offers advice on magic in exchange for cash – well, you get the idea. Quite apart from the main task of dungeon exploration there are plenty of puzzles to be solved and activities to engage in above ground, and they provide a large part of the game's appeal.

There is also the guild, a secretive, monastic sect found only in the town of Treihadwyl. They can perform superficial func-



TWO MINUTES IN TREIHADWYL

Whenever you load a saved game or simply travel around Trazere, you encounter the main map screen. At the beginning of your very first game it's a good idea to head south for the town of Treihadwyl.

Each village, town and special location has its own still graphics screen which tells you what can be found there. In Treihadwyl's case there is a tavern, a blacksmith, an artificer, and the guild.

Selecting any location takes you to a sub-screen, showing you the services on offer. At the guild you can alter the design of your heroes, or train them. First of all though, your adventurers need experience ...

... and this is usually gained by entering the dungeons.

These provide the main action in Legend, involving spells, combat, puzzles and dead ends. But how do you get past those locked doors



tions such as changing the colour and name of your characters, but they can also train them to new levels of ability once the required experience points have been gained. In addition, they guard the gateway to Legend's major testing ground: the dungeons.

The dungeons

These labyrinthine levels are where you will spend much of your time, and are an excellent compromise between role-playing and arcade action. They are large, sprawling mazes of rooms and corridors, packed with puzzles, traps and objects – and, of course, monsters.

Legend's magic system is outstanding. It's not a case of unleashing ready-made spells, as with Eye of the Beholder, or of combining a few runes, as with Dungeon Master. It's far more innovative: you have a mixing bowl, a list of basic ingredients, knowledge of a couple of basic runes (at the beginning, at any rate), and you're left to get on with it.

Well, not quite. The manual explains some general principles about the way the runes interact, and the initial walk-through accustoms you to the procedures you need to follow. Even so, there's a much greater sense of involvement and achievement when you're physically mixing the potions yourself. One unusual feature is that, as your experience increases, you can mix increasingly complex spells, creating a whole sequence of effects (such as healing wounds, launching a damage spell, paralysing an enemy and protecting yourself) with just one command.

The way magic works is typical of the game's excellent presentation. For example, you can consult a reference screen to remind you of ingredients for a particular spell (in case you forget), you have a scroll telling you the type and number of spells available, and you can instantly regenerate spells you already know without having to go through the process of gathering the ingredients and mixing them again. The only minor drawback with this is one of realism: accessing the magic screen pauses the action, which means that you can stock up on large numbers of spells in the heat of combat.

Weapons and combat

Fighting is the speciality of the berserker and the assassin. The runemaster can guard against other magic users, heal wounds, and provide effective missiles, and the troubadour can increase the party's statistics with a few tunes, but the hard

HEROES AND HEROINES

Meet your adventurers: the troubadour, a kind of minstrel who plays a variety of mean 'n' magic tunes to help his chums; the berserker, the heavy artillery of the group whose uncontrollable rages can wipe out opposition in a flash; the assassin, whose use of small weapons is second-to-none and who can also hide from the forces of chaos when the situation gets hairy; and the runemaster, whose skill with bats' wings and brimstone is vital to the party's progress.

As you can see, Legend has only four character classes, which is minimal by role-playing standards – but it does make good use of what there is. For a start, you actually get to see your adventurers in the

dungeons, unlike the many first person 3D games such as Eye of the Beholder.

This does make a difference, not only because you can change the sex of your party and even alter the colour of their clothes, but also because it's more compelling to watch them explore the dungeons, and fight and flee from the enemy.

Secondly, you have a limited customisation facility, which allows you to align your heroes with the four elements of earth, air, fire and water, altering their statistics accordingly. These statistics are adequately comprehensive, including attack and defence factors, armour class, strength, intelligence, speed, dexterity, constitution, luck and hit points. Naturally enough, objects found in the dungeons can enhance a character's abilities.



slog of combat is a job for the brawn in your party. Your basic kit won't get you far, but fortunately the dungeons are littered with old armour, including mail shirts, gauntlets and boots, and with a variety of weapons, rings and wands, which will all increase your abilities.

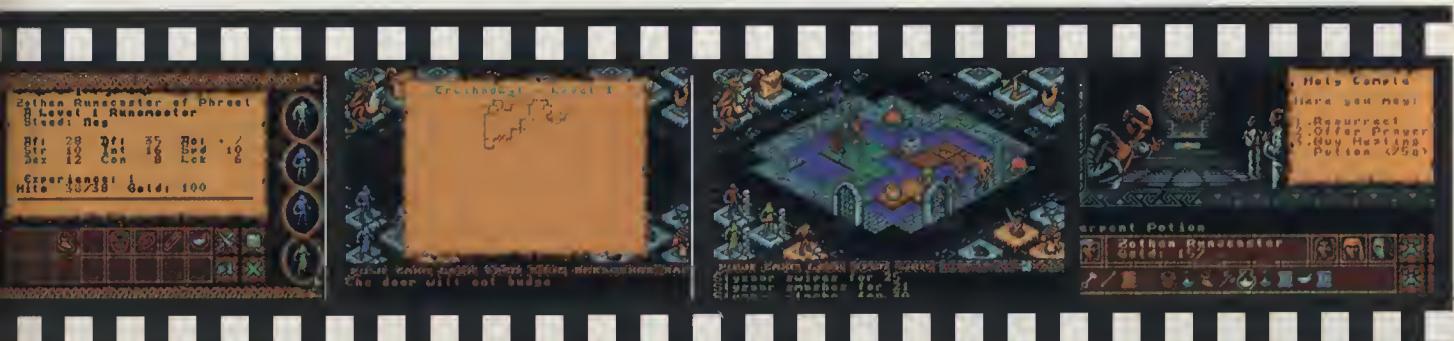
As well as combat and exploration, much of the action in the dungeon levels involves solving puzzles. Some of these are simply a case of pulling a switch to disable a trap, but most of them are complex enough to keep you occupied for some time, particularly in the later stages. Luckily, there are a few clues lying around, and your confidence increases once you've

Checking the inventories doesn't help: none has a key, and they aren't strong enough to smash the doors. However, the runemaster eventually reasons her magic could provide the answer.

It does, and it isn't long before your party is exploring the huge number of rooms and corridors in the first level. One handy feature of the game is this auto-mapping facility which, thankfully, also pauses the action.

Exploration is not just about looting chests and solving puzzles: there are plenty of creatures from the underworld who are just waiting to wield their axes and practise their magical spells on you.

Don't despair if most of your party dies in battle: in classic RPG fashion you can pick up their bones and carry them off to the nearest holy temple. Here, for a fee, they will be resurrected with their inventory intact.





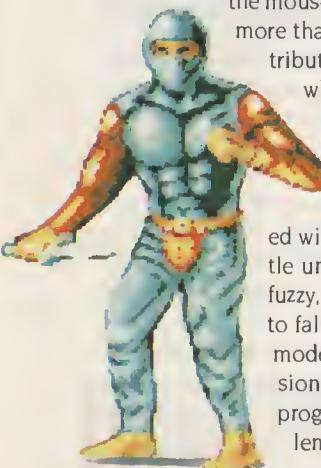
Your adventurers can visit a wide variety of shops, which will supply anything from weapons to healing potions.

mastered the magic system and found a few keys. However good you are though, it's more than likely that eventually some members of your party will bite the dust. When this happens there's no need to panic: as long as you have one character left, he or she can carry the bones of the rest to a holy temple, where they can be resurrected.



And finally ...

Legend has one of the most user-friendly control systems of any RPG. Most actions can be executed with a single click of the mouse button or a key-press, and there is often more than one way of performing a task. This is a tribute to the game design and structure, which is virtually flawless.



Inevitably, there are some annoying aspects. The Ad Lib sound effects are pretty poor, particularly in combat where your mighty slashes are rewarded with pathetic pings. The music is also a little underdeveloped: the title theme is a little fuzzy, and the troubadour's stirring tunes tend to fall flat. Other faults are more minor: in 3D mode, for example, your characters can occasionally get in each other's way, though the program usually copes well with this problem. In its favour, though, the inventory and

REQUIREMENTS

HARDWARE 
 The Legend box comes complete with two 3.5" disks and four 5.25" disks. The game itself requires 640K RAM and DOS 3.3 or better, and speed isn't a problem. It must be installed either on to floppy disks (which you use to save games) or, preferably, on to a hard disk - you can't use the original disks. A mouse is recommended, though not essential. The Ad Lib sound effects are disappointing, particularly in fight scenes, but the variety of music compensates.



ALTERNATIVELY...

Heroquest

Gremlin, £29.99

This isometric 3D RPG is an accurate conversion of the Milton Bradley/Games Workshop board game, comes complete with the expansion pack, Return of the Witchlord, and is aimed primarily at 9-14 year olds. The simple action reflects this: there are only four heroes, there is little interaction in combat sequences, and there are too many unatmospheric empty corridors and rooms; however, there are some neat features, such as an auto-mapper and the ability to trade treasure for weapons in the equipment shop. It's a good, basic introduction to arcade style RPG, but won't seriously challenge experienced gamers.



Might and Magic III

New World Computing/US Gold, £40.99

The first two games in this series presented an Ultima-style bird's eye view of the action, which here has been replaced by a first-person viewpoint. The graphics window is larger than any other game of this type, allowing masses of detail and adding an extra level of atmosphere. Unfortunately, it's spoiled by some nasty technical drawbacks: even on fast machines the disk accessing times are excruciatingly slow, and the program has an embarrassing habit of crashing at the worst moments. This problem is amplified by hordes of extremely tough monsters. The good news is that you can have up to eight characters, the puzzles are excellent, and the graphics and sound are very good indeed.



Eye of the Beholder 2: The Legend of Darkmoon

SSI/US Gold, £34.99

Probably the best Dungeon Master-style RPG available (until Dungeon Master itself comes along, at any rate), EOTB2 is the sequel to SSI's single-dungeon original. Both games have similar faults, including monotonous exploration of seemingly endless corridors without an encounter in sight, and an unimpressive magic system, but the sequel does at least have more depth. This is partly due to the beginning which, unusually, is set in a forest, and the fact that there are reputedly three dungeons and a brace of towers and temples to be found. There are also plenty of positive presentation features, such as beautiful still graphics screens, a wide scope of character interaction, fiendish puzzles, and easy-to-use controls. An excellent, atmospheric RPG which offers months of enjoyment.



statistics system is particularly well structured once you get used to it, and the auto-mapper in the dungeons is an excellent feature. As you get further into the game you begin to realise just how complex your task is: not only do you have to conquer the dungeons, but you also have to keep your eye on the enemy's progress and find a way to enter all the apparently impassable locations.

It's particularly good to see an RPG, with considerable depth and a neatly illustrated colour manual, at a reasonable price. (Mindscape has thankfully resisted the temptation to stick a £40 burden on Legend.) This relatively low cost makes an already attractive, beautifully designed and enjoyable game even more compelling.

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SOFTWARE REVIEW



■ Omar Sharif's Bridge
■ CP Software
■ 0993 823463
■ £39.99

CP Software has been trying to make bridge computer-friendly for years, and has brought in Omar Sharif to give it a human face

For those who only have the vaguest idea of how to play bridge, it works like this. Four people sit at a table with a pack of cards, playing two against two, and play whist. Before the hand is played out, an auction is held to determine which team will choose the trump suit, and how many tricks they intend to make (see panel for a more detailed explanation). Like all the very best games, the premise is simple, the implementation almost infinite in its permutations.

Omar Sharif's Bridge (the actor is also a world class bridge player — this isn't a bizarre new type of celebrity tie-in) attempts to tackle both the teaching and playing side of the game. Since most people are familiar with the principles of

How to play bridge

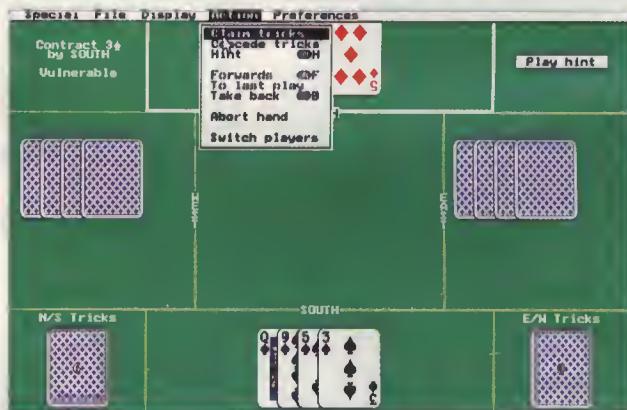
Bridge jargon stipulates that the players are dubbed North, South, East and West. North sits opposite South; they play as partners against the East-West pair. Each player bids (or passes) in turn, by stating a number of tricks out of 13 and a preferred trump suit. The first six tricks are taken for granted, so a bid of one club by South means that he/she is suggesting that the partnership can take seven tricks if clubs are trumps. Bids proceed clockwise and each bid must rank higher than the previous one. When three players have passed after a bid, the auction is over and last bid made is now the contract.

The player who first bid the current trump suit becomes the declarer; the player on declarer's left plays the first card to the first trick. Declarer's partner lays all their cards face up on the table for all to see. He/she is now 'dummy', and must make coffee/drinks/take the dog for a walk. Declarer must now, with the advantage of seeing both hands in the partnership, and playing each card strictly in turn, attempt to make the stated contract. The other two players are the defence, and must attempt to defeat the contract.

Omar Sharif's Bridge

whist, it is the bidding system which always takes up the bulk of teaching a beginner, and Omar Sharif comprises not only a brief summary of the rules and principles governing bidding but also a number of tutorial and sample hands which you can play. If you wanted to learn how to play bridge from scratch, the tutorial hands plus the how to play section from the manual could certainly get you started, although without much understanding of the hows and whys of what you were doing.

The game can be used to practise bridge with randomly dealt hands, or you can set up your own hands for specific practice. The screen layout is clear and neatly presented, and there are also a host of options: you can take back bids or



Omar Sharif is largely menu-driven. The Actions menu is the most useful for taking back cards, switching control of players and other 'cheats'.



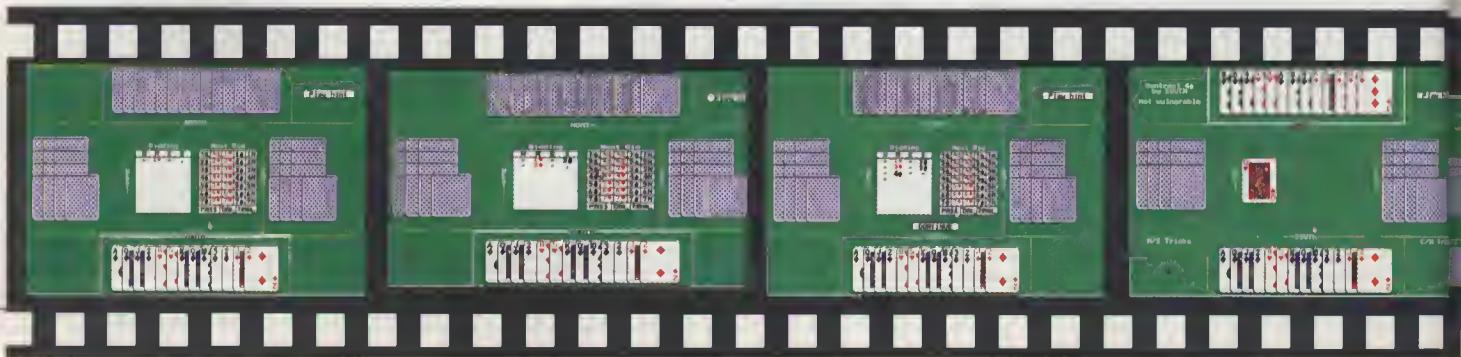
TWO MINUTES OF BIDDING AND PLAYING

You can key in a bid or select it from the menu. A nice touch is that the menu scratches out any illegal bids.

I've bid 3C rather than the possible 2C, to show North that my hand is strong and we should be in a high contract.

Try the spades ... North raises to four, so we're now in a game contract (10 tricks with spades as trumps).

West leads to the first trick and North lays down the dummy hand. It's, er, not quite what I was expecting.



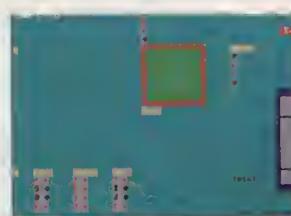


ALTERNATIVELY...

Bridge Pal

Various (shareware), \$9.95
to register

Has the interesting options of playing solo (ie, against the computer), or duplicate bridge. In solo mode, it doesn't do random hands; you have the option either to have the better cards or not.



Turbo Bridge

Various (shareware), \$9.95
to register

It's certainly fast, but the character-based display is dull and can be confusing. Control is keyboard only, so you need to type in the number and letter of the required card each time you bid or make a play.

tricks, abort a hand altogether, get the program to explain the score, etc. One thing that is missing is a single option to restart the whole hand: say you've arrived at a 4H contract, the cards go down and you can see that you'd be much better off in a spade slam. At this point the only way to restart right from the bidding is to play the hand out, save it to disk and then reload it, which is cumbersome. Also, on my (finished) copy, reloading hands from disk was a rather hit and miss affair.

Omar Sharif the program has precisely the same drawback as any other bridge program: the computer players are transparently software-generated. The program has its bidding system (a choice between standard Acol and Five Card Majors) and if this doesn't agree with your own, there's nothing you can do about it. Programmed in is the use of the Stayman convention (asking for major suits after a no-trump opening) and Blackwood (checking for aces for a possible slam). There is a line in the manual which reads, "the computer uses many complex bidding strategies and it may deviate from the rules ... in certain situations". Unfortunately, it gives no hint as to what these might be (though I've detected the odd take-out double and cue bid).

The program's cardplay is frustrating. I haven't kept an exact count, but I would guess that the program will lead trumps in defence at trick one over 50% of the time. Now I accept that there are times when leading trumps is the correct move (even if I can rarely identify them in real life), but in general it only helps declarer.

Inputting your own hands in order to practise the finer

points of card play is an attractive option and simple to implement, but here it would have been nice if after keying in the hands for yourself and partner, you could get the program to distribute the other 26 cards between your opponents randomly. As it is, you have to allot each card individually, which means that when you come to playing the hand out, you already know where all the outstanding cards lie.

For those who play bridge, the attractions of playing with the computer are to make up for a shortfall in real life partners and opponents, or to practise with sample hands. The first option is interesting, but no substitute for the real thing. The second can only really be effectively played by toggling control of the four players from 'human' to 'computer' and back and keeping the cards face up to try out different strategies.

One day, someone will program bridge to play more like an expert (and a very long, fascinating exercise in artificial intelligence it will be, too) and put all those chess programs in their place. It may well be CP Software, which has been working in this field for years, and Omar Sharif is definitely an improvement on its Bridge Player series for other machines some years ago. Omar scores well in terms of attractive presentation and options, and as a beginners' package, but the day hasn't dawned yet.

CHRISTINA ERSKINE



REQUIREMENTS

Omar Sharif comes on two disks. A hard disk is recommended, where it will take up around 700K if you install all the sample hands as well. You'll also need about 565K of RAM free. A mouse is by far the best way to control the game. There's also a copy protection routine based on keying in words from the manual, which runs after initial installation only.

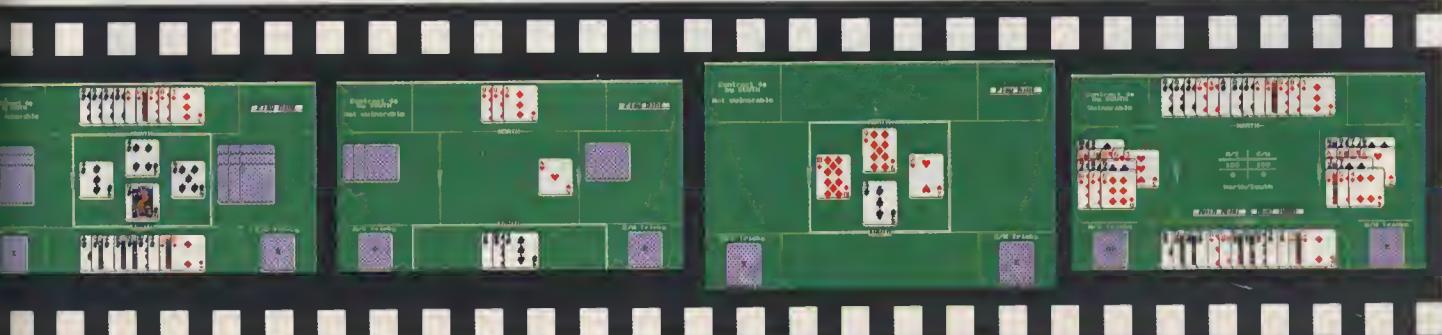


To lose only one trump trick, both the ace and queen must win tricks. So I've led a small trump from dummy.

Three tricks left, and I'm going to make my 10 tricks. I can play the last trump now, and the two clubs in my hand are winners.

This last trick shows that even the lowest of cards can win, since no one else can follow suit to my three of clubs.

At the end of a hand, the screen shows the full deal and the score. North/South's 120 is the score for this four spade contract.





SOFTWARE REVIEW

Fascination
Coktel Vision
(0276) 684959
£49.99

Just imagine you are a beautiful busty international airline pilot with the unlikely name of Doralice May. While flying between Paris to Miami, a sick passenger asks to see the you. Telling you this is a 'most important matter', Fayard Nichols hands you his briefcase, imploring you to deliver it to the President of Quantum Unlimited Laboratory, and promptly dies in your arms.

So begins *Fascination*, a steamy CD-ROM game from French developer Tomahawk. It gives you the opportunity to become Doralice, sex kitten and international airline pilot, as you accept the mission of delivering the contents of the Fayard's case to its rightful owner in Miami.

As you go about tracking down Jeffery Miller, the President of Quantum Unlimited, you discover he has invented an 'amazing cerebral-chemical substance' which promises to revolutionise 'neuro-psychiatry'. Enter stage left bad guy, Peter Hillgate, alias Doc, the evil plastic surgeon, who has found the dark side of Miller's new drug, which he intends to market as a powerful stimulant regardless of the potentially damaging side effects which come with large doses of the drug.

Only one thing is certain, you can be assured that along the way you'll encounter a whole cast of semi-clad and uniformly busty females and they all love to flirt.

If the plot all sounds like a bad Jeffrey Archer novel or one of those hideous American mini-series to you, then you're right. It has that all-important mix of lust, power, money, greed, and murder. The only thing which saves the game from descending into the completely ridiculous is the quality of the play, which allows you to get right in there and indulge in a bit of the action yourself.

Locked secrets

In the same style as *Déjà Vu*, *SpaceShip Warlock* and other virtual environment games, *Fascination* involves a range of navigable and interactive environments. In the beginning, for example, you are deposited in a Miami Hotel room, fresh from the plane and Fayard's death, with a remarkable absence of jet lag. You can then explore the hotel room with the mouse, clicking on objects to investigate them.

One of your first tasks is to find the phial of Miller's drug, which is hidden in the briefcase. To do this you click on the



Fascination incorporates quick snatches of digitisation, which are kept memory-efficient by their size - here, using that old "seen from across the street" play.

Fascination

Death, intrigue and double-dealing in high and low places. The world's most unlikely detective - and airline pilot - Doralice May investigates

case and a window showing the case's lock pops up on the screen. Enter the correct code into the lock and a fresh window, representing the open case, appears, and this allows you to search through the contents.

It is possible to pick up and keep many of the objects you come across on your travels. Clicking on an object will allow you to pick it up. The cursor now changes into the shape of the object. Using clicking the right mouse button puts the object into your personal inventory, which you can carry with you from screen to screen. Once you have an object in the inventory you can pick it out using the right button and use it on a person or thing later in the game.

One of the most important tricks as you progress through each new environment is to always use the objects you collect on the people you come across. This will often elicit a telling response. Initiating a conversation with each of the characters you come across is also generally a good idea. All you need to



Even the blandest looking location needs to be searched and examined minutely: pretty well any object which moves, or can be acted on, will be relevant to the plot.

Fascination



I'm Doralice... The sexiest captain on the Paris-Miami flight! You like suspense? Well, you're invited to spend a delicious weekend with me... Fasten your seatbelts, we're ready for takeoff!

Fascination's airline pilot cum detective Doralice May is directly descended from the heroines in mini-series, or Judith Krantz blockbusters. Sex and shopping occurs pretty much as frequently in Fascination as well.

do is click on them with the mouse and they will then speak. Most have something useful to say.

Another important clue is that their response to you will change depending on whether or not you have performed the right set of tasks before. It's dangerous to assume that you know what they have to say. But beware: many of the snippets of wisdom you get in this drama are also designed to throw you off the case and, as in life, it pays to believe no-one.

Bad B-movies

All too reminiscent of bad B-movies, there are many points on which Fascination is all too transparent. Like a film in which every plot point has obvious significance and the ending is a certainty, so is everything you encounter in Fascination. After all, if the programmers have gone to the trouble of making an object movable, interactive, or collectable then you know it has a role in the unfolding drama. However, the game avoids giving away all its mysteries too easily, by hiding many of the key objects, which are often only a few pixels square and therefore hard to spot.

The other complication is you often need to perform a key sequence of tasks before you can move from one environment to the next. For example, in the beginning of the game you need to find the correct hiding place for the phial once you have removed it from the case. Unless you do this correctly your room is ransacked, the phial discovered, and you are declared a failure by a very ugly thug.

But once you have honed in on the strategies employed in Fascination, you can whizz through many of the tests. The game's designer has included a truck load of hints and prompts, and if you read or listen to the commentary and speech components carefully you find they point you in the right direction.

One of the strangest elements of Fascination is its raunchy graphic style. These leave you with no doubts about the designer's testosterone levels with the constant parade of well-endowed women being the one thing you can count on. This guy really needs a few cold showers! Doralice also engages in a few sessions of suggestive banter with her erstwhile suitor, Robaire de la Caffetiere, who turns out to be a complete waste of space, passing out while the night is still young. It is actually pretty disconcerting occupying the body of a woman with such poor taste in men. Robaire really failed to make the earth move for me.

Personally, Fascination's fascination with the female form, and particularly in its most curvaceous manifestations seems a little gratuitous to me, and added very little to what is otherwise a very playable and engaging game. But then that's all a matter of taste.

The game uses the huge capacity of CD-ROM to provide an experience that would be impossible with floppy disk. The gameplay is greatly extended by use of the CD-ROM media. After a few long sessions there was no sign of an end in sight. The graphics are in VGA, and are clean but blocky. A good deal of the producers' energies seem to have been poured into the soundtrack, as there are many hundreds of 'sound bites' in the game. The quality of the characterisations is in keeping with the B-movie feel of the whole production, but they certainly add a lot of character to the game.

Tomahawk/Coktel Vision has also used the capacity of the CD-ROM to digitise all the speech in five languages – French, Dutch, English, Spanish and Italian. When you boot it up you have the option of using either one.

The game supports a good range of sound cards including InterSound, Ad Lib, Sound Blaster and MediaVision. You also have the option to play the game without the sound, but when I tried this it was just as engaging. Using the Sound Blaster Pro,

and just the standard Microsoft CD-ROM extensions I had no problems getting the program to work. You can get the impression that the sound isn't working, as the game boots up in deathly silence in the introductory screens.

Some of its side-preoccupations aside, Fascination is an appealing and very playable game which makes good use of the CD-ROM medium to deliver depth of game play with an entertaining soundtrack.

TIM CARRIGAN

REQUIREMENTS

PC, 640K RAM, CD-ROM drive, Microsoft CD-ROM extensions to DOS, and VGA are all required.

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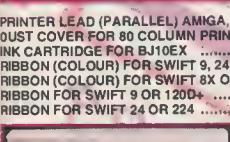
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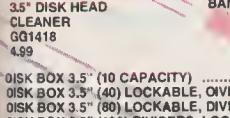
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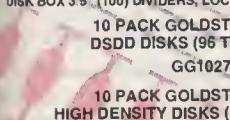
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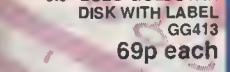
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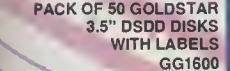
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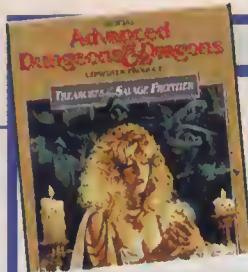
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SOFTWARE REVIEW

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SI's AD&D system has not been dragged kicking and screaming into the 90s, rather given a few tentative shoves. Sadly, the latest 'improvements' in the system also amount to a lot less than the kick in the backside that this role-playing series desperately needs.

Treasures of the Savage Frontier kicks off where Gateway to the Savage Frontier finished. Having apparently achieved complete victory at Ascore, you are summoned by your old friend

SSI claims that its newest Advanced Dungeons and Dragons game uses a greatly improved system, but how much better is it?

Treasures of the Savage Frontier

Amanitas who informs you that the evil Zhentarim legions have once again reared their ugly heads. Your first task is to help the dwarves at Llorkh to defeat the enemies that have already made successful forays into areas of the fort. Having done that you can venture onwards to Secomber and find out what other new perils await you.

The first thing you will need to play this second Savage Frontier episode is a strong party. You can load up a surviving party from Gateway, or you can use the pre-rolled party supplied with the disk. Be warned though that the latter is not particularly powerful and, if you need a new party, or a few more members to flesh out an existing one, you'd be better off spending the time rolling them from scratch. Like earlier AD&D games, there is no way of manually entering the details of characters you use in the table-top version of AD&D, which is a shame for aficionados of the game. You can change the appearance of your character's icon, but this is a small concession to the sort of versatile character generating system that could have been included.

Once you begin you are faced with the same old rusty interface. What does SSI think it's doing? While this menu system was fine when the system was in its infancy (and, incidentally,

when fewer users had mice), now it looks and feels cumbersome. Almost every review of an AD&D game points this out, and on each occasion the criticism has been ignored. This is undoubtedly partly due to the strong sales of the series to AD&D fans, but SSI could attract so many more players if it bothered to update the system.

The crude graphics and presentation could also do with a lick of proverbial paint. SSI has already shown what it can do with Eye of the Beholder, so why retain these clumsy, ugly visuals? The still artwork has shown steady improvement with each game, but the isometric combat screens, while showing some promise, are still what can only be described as wooden-looking, and the 3D window is a disgrace for a new game.

Don't give up the fight

As per usual, unless you let the computer handle combat, it is slow and frequently boring. This is unfortunate as Treasures is very combat oriented. In fact, the first section of the game is nothing more than a series of forays into the occupied fortress to mash up the forces of darkness. Other than what is required for battle strategy, the intellect of the player is very rarely challenged.



TWO MINUTES OF THE FIGHT AGAINST DEATH

Find out your task from the intro sequence and set off into the blazing dawn.

A little initial help doesn't go amiss. Thanks Mr. Dwarf, maybe we can repay the debt.

We haven't gone far when we come across trouble. There's no turning back now.

The combat begins. We're facing Driders and Ettings who are both extremely nasty.



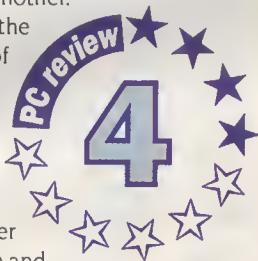


SPELL: MAGIC MISSILE

Combat works in the traditional melee round system in which moves are made in order of initiative. Most aspects of this work very well, but it is hampered by the control interface.

Combat has been improved by the addition of a reinforcement rule. Under certain conditions, extra forces can arrive during a battle and aid one side or another. This can be extremely useful when the battle isn't going your way and all of a sudden half a dozen mad dwarves come screaming round the corner and hack 10 types of hell out of the opposition. The principle works both ways, however, and it could be that you think you've got the upper hand when more enemy forces arrive and turn the tide of the battle.

The one saving grace of this series of games is the way that the AD&D rules have been lovingly and carefully translated and



REQUIREMENTS

HARDWARE
Supplied on two high density disks, this game must be installed on a hard disk, and takes up about 2.8Mb of space. You shouldn't experience any speed problems on slower machines (there is a speed compensation option accessible from within the game), but combat runs far too quickly on fast 386s or 486s! Using a mouse or joystick is often more fiddly than just putting up with keyboard control.



To defeat them easily is to use a bit of magic: the stinking cloud spell should do the trick.

Having won the battle it's time to split up the treasure that the creatures left behind.

Before we tackle anything else, let's retire to the local tavern to relearn spells and rest.

Finally check on your characters' condition before going out to face more forces of darkness.



ALTERNATIVELY...

Eye of the Beholder II

US Gold, £35.99

If you want an example of what SSI can do when it tries, this is it. Beholder II is a fine piece of 3D programming, and the plot is excellently realised, although it is a little tough for beginners.



Shadow Sorcerer

US Gold, £30.99

Closer to the gameplay style of the traditional series, although the isometric graphics are infinitely better and you can control up to four characters simultaneously. Unlike Savage Frontier, the combat takes place in real time.



Magic Candle 2

Electronic Arts, £34.99

A similar system, but it allows you to create several parties from more than 30 characters. The emphasis is far more on problem solving than combat, so it may be more to your taste if you're looking for something intellectual.



observed. Each spell, character type and creature corresponds exactly to the original rule books. Being slavishly faithful makes sense: the AD&D rules have had nearly two decades to evolve and it is difficult for a game not to be enjoyable if the scenario is imaginative.

One addition which I anticipate the fans will not like is the Barbara Cartland episodes. The game is sprinkled with sickening little set pieces in which a character and an NPC gradually fall in love with one another. Maybe I'm getting too old and cynical and other people will find it adds atmosphere to the plot, but somehow I doubt it.

The real shame about the whole AD&D fiasco of late is that, underneath the crummy outmoded system there are some very good games struggling to get out. Once you have resigned yourself to the appalling interface, you'll find that Savage Frontier is very absorbing. It's just a pity that it could have been so much better.

LAURENCE SCOTFORD





SOFTWARE REVIEW

■ **Dreadnoughts**
 ■ **Turcan Research Systems**
 ■ **£34.95**
 (Bismarck and Ironclad scenario disks £16.95 each)
 ■ **(071) 625 8455**

Veteran war game designer Peter Turcan takes to the high seas again in this tribute to the glorious age of the battleship

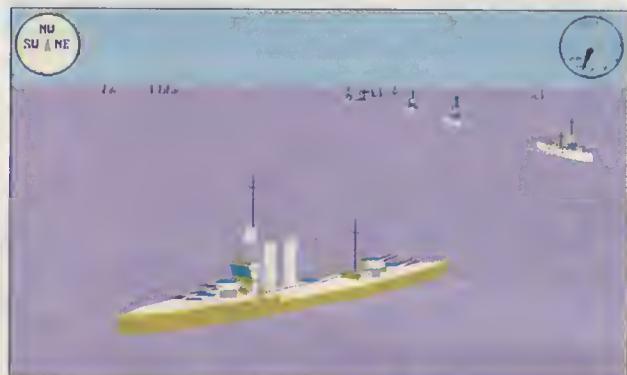
Waterloo, Austerlitz, Borodino, Gettysburg and the Armada are all famous battles that have been the subject of strategy wargames written by Dr Peter Turcan. In the good doctor's latest venture he is once again getting his feet wet. Dreadnoughts "recreates the looks, specifications, and tactics of the great naval fleets during and before the age of the battleship".

The game is limited to surface action, when the opposing fleets would actually see each other, and covers a period (with the scenario disks) from 1894 to 1943. The master package includes three hypothetical scenarios, and four historical. The latter are The Battles of Coronel (1914), Battle of the Falklands (before the exclusion zone in 1914), The Battle of Dogger Bank (1915) and most famously the Battle of Jutland (1916).

In each of the initial scenarios, and in those on the two additional disks, you can select either side, play against the computer, against another person, or watch the computer take care of everything. The gaming system, a development of Dr Turcan's previous war game engines, is very user friendly.

Graphics are very crisp, the individual ships and classes being recognisable, and even the coastline being well drawn. Sound support is for Sound Blaster, and Sound Blaster Pro, but the program strangely did not recognise the Sound Blaster compatible ThunderBoard. The sounds seem limited to gunfire, whistles and the impact of shells, but added well to the sense of 'being there'.

Dreadnoughts



Order (Bridge): HMS LION LEADING THE GRAND FLEET AT JUTLAND

H.M.S. Lion leading the Grand Fleet into action at The Battle of Jutland in May 1916.

The Admiral Nelson pitfall

At the simplest level you remain merely the Admiral, setting general strategy, and allowing your highly trained subordinates to carry out your orders. They will seek your permission for any change of tactics, and automatically perform 'knee-jerk' reactions to torpedo attacks, damage repair and so forth.



REQUIREMENTS

What a tidy piece of programming! Will run from floppy disks, if installed on hard disk takes up only 720K! 640K memory required. Scenario disks similar. Sound Blaster and Sound Blaster Pro supported. Mouse optional, 640K memory required.



TWO MINUTES OF BISMARCK VERSUS HOOD

The German super-battleship, Bismarck, with its main 15 Inch armament.

Prinz Eugen was the only German capital ship to survive the World War II.

The Bismarck and Prinz Eugen steam through the Denmark Straits In May 1941.

The Bismarck makes contact with Prince of Wales and Hood.



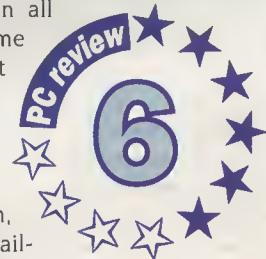
Dreadnoughts

Alternatively, if the Lord Nelson in you starts to take over you can become more and more involved, and assume control of both the helm, and the engine-room. Probably in scenarios such as Jutland, you will decide you have too many other things on your mind.

Once contact is made with opposing forces, you as Admiral must first make a decision as to the range you intend to keep. If you have the advantage in gunnery range then pick him off at a distance, if not, then try and close the range as soon as possible. Once battle is joined the pace rapidly increases, and lead (or rather shells) starts flying in all directions. Damage reports become available, and it is wise to request 'points' to show how the battle as a whole is progressing. Most scenarios seem well balanced, and with care either side can win.

In addition to the main program, two scenario disks are currently available. The first, 'Ironclads', covers the immediate pre-dreadnought era, the major conflicts round the turn of the century like the Sino-Japanese War (1894), and the Russo-Japanese war (1904/5). One of the unique attractions of Dreadnoughts is the ability to develop and perfect naval tactics during the most dynamic 50 years in maritime history. You as Admiral will have to learn the effects of greater speed and protection, more accurate gunfire and more efficient and destructive shells. Tactics which may have scraped a victory in 1894 against the Chinese may not be sufficient to overpower and defeat the might of the powerful King George V Class battleships of World War Two.

So, what criticisms can be levelled? The limited number of options available, orders, ships, and what have you, cry out for either 'drop-down' menus or a windows interface. This would reduce some of the repetitive typing and 'smooth out' the general gameplay. The 'battlefield views' are varied and smooth, but are rigid. An ability to roam over the area at will would improve atmosphere, and assist in tactical considerations.



Gunflashes from 'Anton' and 'Caesar' turrets of the Bismarck as it engages HMS Hood

KMS Bismarck and HMS Hood exchange broadsides.

Bismarck starts to find the range of the Royal Navy's veteran battlecruiser HMS Hood.

The Bismarck is straddled by the big guns of the Hood and Prince of Wales.

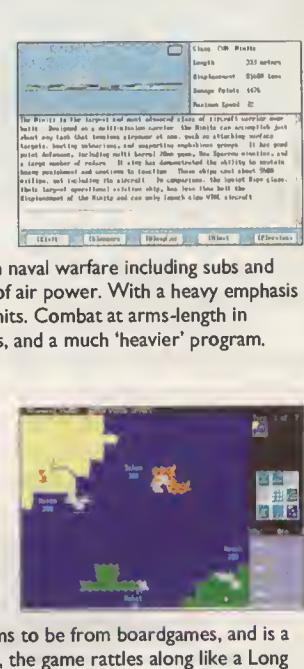


ALTERNATIVELY...

Action Stations
Intercine, £29.99

Complex 'Naval Surface Combat Tactical Simulation' dealing in huge detail with each ship's level of weaponry and armour. And a little like reading the technical supplement to Jane's Fighting Ships. It's effectively 'text only' with a few rudimentary CGA graphics. Very much for the committed enthusiast, or those who enjoy tinkering with spreadsheets. With its vast amount of statistics and technical information.

NAME		TYPE	CLASS	ARMAMENT	ARMOUR	SHIELD	CONTROLS	WEAPONS	ARMOUR	SHIELD	CONTROLS	WEAPONS
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Intercine	3	Medium	None	None	None	None	None	None	None	None	None	None
Intercine	4	Small	None	None	None	None	None	None	None	None	None	None
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The 'perfect' war game probably doesn't exist. The purists would say it is too 'arcadey'. The non-hardliner would say they get choked in the 'fog of war' and playability has been sacrificed for realism. There has yet to be a truly popular war game on PC, but Dreadnoughts is a broadside in the right direction.

ROBIN MATTHEWS



SOFTWARE REVIEW

■ **Title:** Jack Nicklaus Golf & Course Design Signature Edition
 ■ **Accolade**
 ■ £39.99
 ■ (081) 877 0880

I bet you think it's easy, don't you? Just find a large piece of countryside, get a map of the area, make a few pencil marks and presto! Your very own golf course! Wrong, course designing is an incredibly difficult and laborious task, involving years of head-scratching design work, land cultivation and back-breaking manual labour.

Thankfully none of this applies to Accolade's latest golfing simulation to carry the Golden Bear's kisser on the front. What you can do is design an entire course in your lunchtime and play a couple of rounds on the thing with your friends, pointing out places of interest and saying "See that bush? I did that" and "That bunker you've just landed in? That was my idea, that".

And the course designer is just the half of it. Jack Nicklaus Golf & Course Design Signature Edition (hereafter known as Jack) also has a completely redesigned golf simulator, with new easy to use controls and two major American courses to hack away at. So now, even if they won't let you in at the clubhouse because of your soiled boots and jeans, you can still get to play with the best of them (including the man himself). I'll deal with this side of the package first.

Starting from scratch

Visually Jack is a significant improvement over both Jack Nicklaus's Greatest 18 Holes of Major Championship Golf and Jack Nicklaus's Unlimited Golf & Course Design (what is it with Accolade and these massive names?), opting for the Links-style digitised graphics instead of the polygon-based style seen before.

The graphics aren't the only things to have been digitised. Sound effects such as the swoosh of the club and the oohs and ahhs of the crowd add life to the game and to have your 50ft putt that missed by a matter of inches be greeted with a loud groan of sympathy by the, ahem, invisible crowd is pretty gratifying. I must admit, they did at first sound like crisp packets being rustled (applauding) and a plane flying overhead (one of the 'oohs') but I've got used to them and after a while you accept them for what they are.

Jack is a lot friendlier than its digitised rival, with a swing system that is simple enough to get to grips with and versatile

Jack Nicklaus & Course Design

Fore ... no, make it a five.

Accolade's latest Jack Nicklaus licence allows you to change whatever you want

When playing against computer generated opposition, you're not totally in the dark as to their abilities. It's possible to alter any aspect of their skills and features, right down to the way they look. Apart from Jack, there are only four different golfer animations, one of which is female.



enough to cover all but one type of shot. Unfortunately the putting is a major let-down. For a start, the relative-sizing of the ball and the hole doesn't work as well here as it does on the fairway and just looks plain sloppy. Secondly, it's very inaccurate unless you put a lot of practice in. Aiming the shot from the top of the screen doesn't allow for any of the delicate fine tuning needed on greens. It's a shame that this is such a penalty as the rest of the game is a real contender.

The problems I used to have with chipping in Links are almost non-existent here, thanks mainly to the universal power line. As with virtually every golf game on the market, each shot is taken with three clicks on the mouse. The first starts the backswing, the second sets the power and the third applies



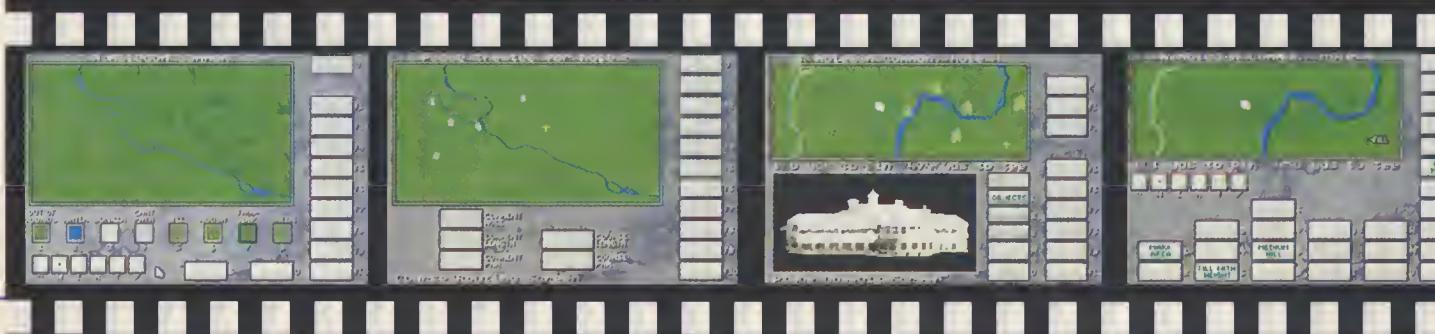
TWO MINUTES OF PETER ALLISS

Designing a course in eight easy steps. First, get a plot of land and shape it as you like. A hill here, a hill there, nothing like a valley to liven things up.

Next you'll want a few holes. Pick a tee position, then indicate either the first dogleg or the hole. Make sure you don't go too far, since even par 5s have their limits.

With the basic hole patterns down, it's time to start getting a little more detailed. Close in on one hole and start to add trees, bunkers, water and other landscape features.

It's also a good idea to add a few small hills or ridges on each hole by marking the desired area, selecting a height and choosing either a sheer cliff or a gentle slope.



laus Golf

signature Edition



Should you make a spectacular drive onto the green, perform a perfect 80-foot putt or even get a hole in one, you'll no doubt want to see it again and again. The replay allows you to see it from the front or from a reverse point of view.

hook or slice (or neither). Having the same system in every game does make reviewing them something of a problem, forcing you to ignore the way the game plays and concentrate mainly on the look and feel of things.

Not everyone manages to make this relatively simple system work well, though, and Links is the prime target of this remark. Because of the small size of the display, judging a shot accurately takes a fair amount of work. Jack doesn't fall into this trap, clearly displaying different power levels (and indicating where 50% power is to make life even easier).

Aiming is a different kettle of fish altogether. As with putting you have to select your direction from the top of the screen. It works better here than it does for putting because there's less accuracy involved, but I would still have preferred to aim from the main screen.



The bar just below the main screen shows the maximum strength of the shot (indicated by the red area), 50% of the club's power (the red line) and gradients of 10% (the white lines). Then you've just to stay out of hook and slice country.

Creating your own course

For something as complex as a course designer, you might expect there to be a pretty informative, friendly manual and Accolade hasn't let us down. Each section of the designer is clearly described, with every option covered in adequate detail. There's also a lot to be gleaned from the How Jack Designs a Course section, covering a step by step procedure for planning out, mapping and designing a real-life course.

The designer is actually quite simple to use and you can create some pretty realistic courses. Planning out hole routes and deciding what obstacles to put where is simplicity itself and to help you along Jack occasionally pops up with a spot of advice. Creating objects and drawing a background is something else entirely. It's actually going to take a bit of work to make anything look as good as what's provided in the first place (remember, they're all digitised). My own feeble efforts

A quick look at the hole so far is enough to reveal that a couple of corners need tightening up and that tree ... surely it shouldn't be in the water!

The background could do with some work as well. Edit one of the existing ones or create your own rolling landscapes. You could even make your course in the middle of a city!

Maybe you want an object or two? Why stick with trees or rocks though, why not go the whole hog and create your own versions of crazy golf. Perhaps a windmill or two?

With everything in place it's finally time to head out on to the tee. The first hole doesn't look too daunting ... oh yes, you put the green right in the middle of a pond.



OFF TO THE 1ST HOLE!

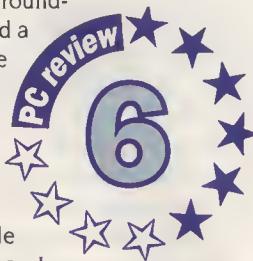
A slight dogleg right, this short par 4 is a tough birdie hole with a well bunkered green.

Before each hole (and at the start of the course) Mr. Nicklaus pops up to offer a smidgen of advice. Avoid the bunkers, stay away from the water and try to reach the green in two. Wise words indeed ...

included a completely out of scale, transparent sign post with No Golfers written in very shaky handwriting and very odd looking golf cart that would be best left in the garage. Thankfully, for those of you with a technological bent, you can import objects from other sources (providing they have an .LBM or .PCX extension). So if you have some sort of digitising facility, go right ahead.

It wasn't until I started hammering away at the course designer that I realised just how tricky it is to design good holes. My first three or four were the usual maximum length par five, a very twisty-turny one surrounded by water, a par three that required a putter from the tee and a nice square that while on paper looked fun, did in fact just need a 90° turn from the tee and a short chip. After that the ideas started to dry up and I spent most of the time messing around with huge cliffs in the middle of greens and marvelling at the way I could get water to run uphill! I'm sure someone out there has a bit more creative talent than I, but I just can't help thinking that most people are going to use it to create their own crazy golf courses and little else.

So there you are, a complete review without ever resorting to the line par for the course. Jack's is a fun product and is by no means the worst golf game ever to grace us with its presence. Its biggest problem is that MicroProse Golf is just around the corner and Links is already the established digitised golf game (even if this deserves to be there instead). It's the course designer that really makes this worthwhile and I would suggest



REQUIREMENTS

Not much is required to run Jack's. 2 Mb of hard disk space is all it takes up and you must have VGA graphics. Speed is also nice, the minimum recommendation being around 16-20 Mhz. A sound board also helps as the noise from the internal speaker is atrocious.

No low-density disk versions are available in the shops, but you can exchange your disks by mail with the included form.



ALTERNATIVELY...



Links

US Gold, £40.99

Technically, Links is the closest golf game to Jack's, thanks to its 256-colour VGA digitised graphics. Real-life courses are photographed from every conceivable angle and the end result (for fast machines) is pretty smart. It's also one of the most technical when it comes to gameplay, allowing you to set up everything from how open the club is to the position of your feet. Jack scores with its course designer and faster screen update, but otherwise there's little to separate the two. It's really all down to whether you prefer driving on your own courses or chipping on real ones.

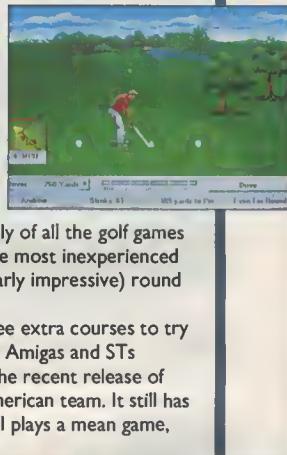


PGA Tour Golf

Electronic Arts, £29.99

Hailed in its day as the golf game, EA's little number is starting to look a little pale when compared to the graphical extravaganzas of Links and Jack's. But before you strike it off the card, just try playing it and see what all the fuss is about. PGA is possibly the most user-friendly of all the golf games on the course and therefore allows even the most inexperienced dabbler to have an enjoyable (if not particularly impressive) round of golf.

Recently EA released a data disk with three extra courses to try and boost its flagging popularity, and on the Amigas and STs (where PGA was also critically acclaimed) the recent release of MicroProse Golf has overshadowed the American team. It still has a large band of supporters though and it still plays a mean game, even today.



Jack Nicklaus's Unlimited Golf & Course Design + Jack Nicklaus's Greatest 18 Holes of Major Championship Golf

Accolade, £34.99

The original Jack Nicklaus games were greeted by very mixed receptions from a public all too familiar with PGA Tour Golf. That hasn't stopped Accolade releasing all manner of data disks, supplements and spinoffs (of which the main feature of this review is but one) to compliment them and they've slowly begun to build quite a following. They're not bad games but they don't have nearly enough class or sophistication to stand up to today's course leaders.



MicroProse Golf

MicroProse, £TBA

Still under development (see Coming Soon in issue 8), Britain's main entry into this 'Ryder Cup' of golf games was a very impressive number on the 'other' formats and looks like being equally good (if not better) on the PC. MicroProse Golf has options coming out of its ears, from different styles of golf games to tee height, you can set everything or anything, making the game as simple or as complex as you like.



The one thing it doesn't have is digitised graphics, spurning the 256-colour masterpieces for more familiar polygon-based courses. This does have the advantage of allowing camera to follow the balls in flight (from various angles).

that anyone with the original Jack Nicklaus course designer should upgrade immediately. Everyone else really just has to ask themselves whether or not they really want another golf game that, when you get down to it, is little different from all the others.

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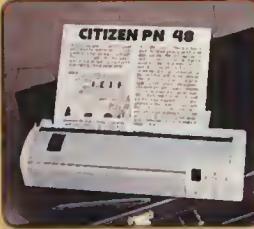


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■ **Ultima VII: The Black Gate**
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Rather than launch into a detailed look at the whys and wherefores of Origin's latest role-playing extravaganza, I'm going to tell you about how the game has changed since our pre-review in Issue 2 and how it plays as a whole. I'll also give it a rating as I know that's what you have been waiting for all these months.

Unlike Ultima Underworld or Ultima VI, The Black Gate fails to surprise. It's really what you'd have been expecting Origin to produce and, while in this respect it's perfectly competent, it's little more than Ultima VI without the menus. What is nice is the way Garriot and co have developed Britannia over the years. The town of Britain is now a sprawling city, with sewage systems, stone streets and houses, while something like Paws (a less developed area) is made primarily of wood, with dirt tracks and limited facilities. This kind of detail brings the game much closer to the kind of fantasy you get in popular fiction.

The stories are also much closer to home than before, dealing with the dissolution of magic in favour of science (a favourite fantasy theme), religious cults, serial killings and even drug problems (yes, even in Britannia). I wouldn't be surprised to see cars and pollution problems turning up before long. These are, of course, all sub-plots, leading into to the main story of the evil guardian attempting to take over the land, but they add a certain sense of realism to everything.

However, and this is where things start to get troublesome, Ultima VII contains a couple of (shock, horror) bugs, some of which are relatively harmless, others which make the game almost unplayable. Possibly the most harmless of them all is the 'red screen' effect (solved by the rather strange method of turning on a few lamp-posts). This seems to be an offshoot of the initial red moongate effect you get before starting each game, the main colour remaining on the screen and washing through to affect everything else.

Far more damaging are the mysterious 'invisible thieves' that seem to plague Britannia. At random points items from your inventory will go missing from your backpack. Keys are a prominent problem here, sometimes going walkabout within minutes of picking them up. Origin has already received a number of calls from the American public on these points and offers the response that at certain moments in the game, Ultima VII initiates a 'clean-up routine', designed to ensure the player isn't carrying any garbage that plays no part in the game. Unfortunately it hasn't quite worked the way it was supposed to and will quite happily pluck items willy-nilly. There are ways around the problem (putting your keys into a container before you rest) and Origin assures us later versions of the game won't contain these problems, but for those of you who are already suffering, you may want to get in touch with Mindscape to see about the possibility of exchanging versions.

Bugs aside, Ultima VII suffers from another problem, the same one Underworld suffered from. It is very, very big, almost to the point where it puts you off. The earlier success leads to a more lavish budget and a more lavish product and while this shouldn't be much of a problem, Origin does seem to have overstretched itself. Still, if you're into the Ultima series in a big way, you're not going to be displeased with this latest chapter. It has all the trappings of a good Ultima game, well-

Ultima VII: The Black Gate — review update



One aspect of Ultima VII that will be familiar with long-term players is the conversation interface. In keeping with the rest of the game there's no typing involved this time, you still get 'key' words that lead to further information, they're just displayed as an ever-increasing menu.

crafted storylines, easy to use interfaces and bags of excitement, even if it isn't as accessible as The Savage Empire.

PC review

4

I suppose I was expecting something completely different and while still on a high with Underworld, it's going to take something very special to draw me away from the 3D spectacular. What might have been better would have been to increase the size of the cities, zoom in for a much closer, more immediate view and maybe include some real urban intrigue. Always using the entire world of Britannia for every story becomes a bit tiresome after a while and basing stories in certain areas only could really help to develop characters and locations.

The Ultima series has many loyal followers, but I would suggest some serious thought before you buy Ultima VII, at least before it becomes available in a bug-free version. It's a lot of money for a product that's been hurried through, and seemingly unplaytested.

PAUL PRESLEY



REQUIREMENTS

You will need (deep breath) ... 21Mb on your hard drive, 561K of RAM, a meg or three of extra memory and a 386 if you can. The graphics are all VGA, a Roland would be astute, and for the speech you'll need one of the Sound Blasters to boot. Annoying pauses for disk accessing break up the atmosphere.



REVIEWED THIS ISSUE

SHADOWLANDS



FATE OF ATLANTIS



LEGEND



OMAR SHARIF'S BRIDGE



JACK NICKLAUS GOLF



DREADNOUGHTS



FASCINATION (CD)



ULTIMA VII



DARKSEED



SAVAGE FRONTIER



KONAMI'S NFL

Konami, £TBA

Another American football simulation which testifies to the growing popularity of the sport in this country. It offers one or two player action with full-play or coaching options. As with most of the other sims of this type around, it covers virtually every aspect of the game – from training camp, where you can customise your players and team, through the various leagues and – hopefully – on to the ultimate match, the final of the Super Bowl. Brief play-testing suggests this is a highly detailed and comprehensive game which compares well with its many rivals.

BARGON ATTACK

Coktei Vision, £TBA

Sometimes it seems there is more than just the Channel separating the French and English. Bargon Attack is another French game which strikes Anglo-Saxon sensibilities as odd. It appears the mysterious Bargons are invading the planet by means of computer software. As the aliens are destroyed on

We would love to be able to review every game that ends up in our postbag, but if we did that PC Review would soon turn into an expensive doorstop. So we

screen they cunningly rematerialise of earth and Paris in particular. Your mission is thwart their evil plans by going to the planet Bargon.

ETERNAM

Infogrames, £TBA

Not strictly a 'game that got away' because we will be reviewing this French product in a future issue. But it's worthy of mention now because it must be the one and only computer game ever to feature a Tracy. Imagine a world where fun parks have been taken to the extreme – that's earth in the not too distant future. The latest park is Eternam, which covers the entire planet and featuring life-sized reconstructions of past eras in a heady mix of fantasy and reality – but a deadly secret lurks behind the glitz and the glamour. Tracy is in fact your guide and mentor to this fun-packed environment and you use your wits, skills and intuition in order to meet and survive the challenges which await in this 'planetopark'. Take it away, Trace.

A QUICK GLIMPSE ...

Bargon Attack

Bargon Attack

Bargon Attack

Konami's NFL



compromise by reviewing an interesting selection from the software available, not necessarily the best! But to keep everyone happy here's a quick round-down of everything else that should be in the shops soon.

WHATEVER HAPPENED TO...?

If you've eagerly turned to the review pages to check out a game that has been pre-reviewed and advertised recently only to be dismayed by its absence, you'll probably find it in our lame excuses' Hall of Fame.

LURE OF THE TEMPTRESS

We previewed the game - which we billed as 'Britain's entry into the world of graphic adventures' - back in Issue 7.



Unfortunately it missed our reviews deadline by a matter of days, but Virgin Games is confident Lure of the Temptress will make it into the software stores by mid-June and we hope to review it in our next issue. First impressions indicate this will be a very high quality entertainment capable of challenging the likes of US software houses Sierra On-line, Dynamix and Lucasfilm.

PC REVIEW'S BEST BUYS

This month's PC Review Recommended games are Shadowlands and Legend. You'll find these titles on specially dedicated racks in 100 of the leading software stores around the country. Set up in conjunction with Centresoft, the PC Review Recommended scheme helps you to make the right choice when it comes to buying your games. Games that have received the PC Review Recommended accolade are:

ULTIMA UNDERWORLD
DUNE
THUNDERHAWK
STAR TREK: 25TH ANNIVERSARY
HEIMDALL
ANOTHER WORLD

SHAREWARE

For those of you on a tighter budget than our recommended list allows, you could always check out the PC Review Shareware section starting on page 123. Covering everything from games to personal organisers, the Shareware section is your indispensable guide.

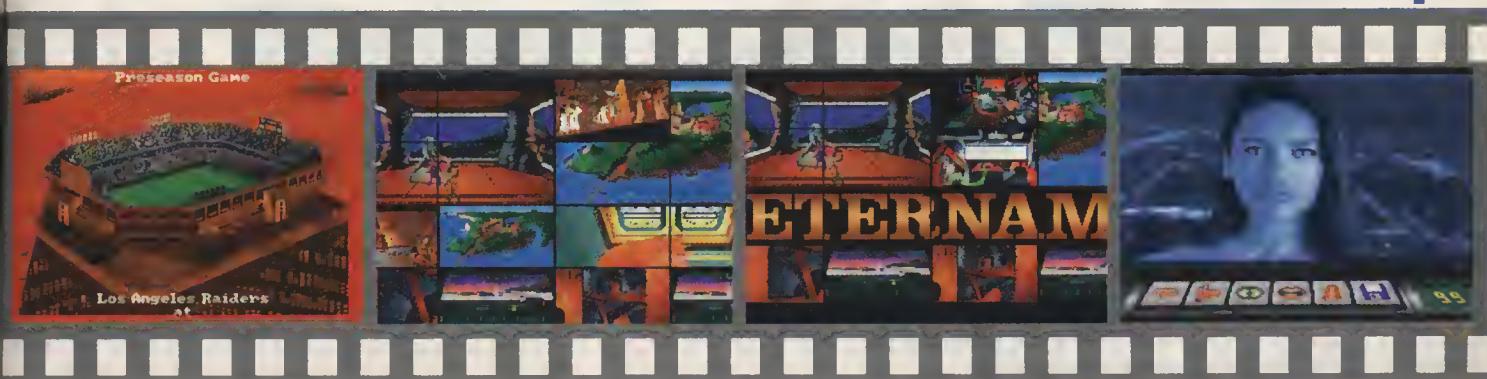


Konami's NFL

Eternam

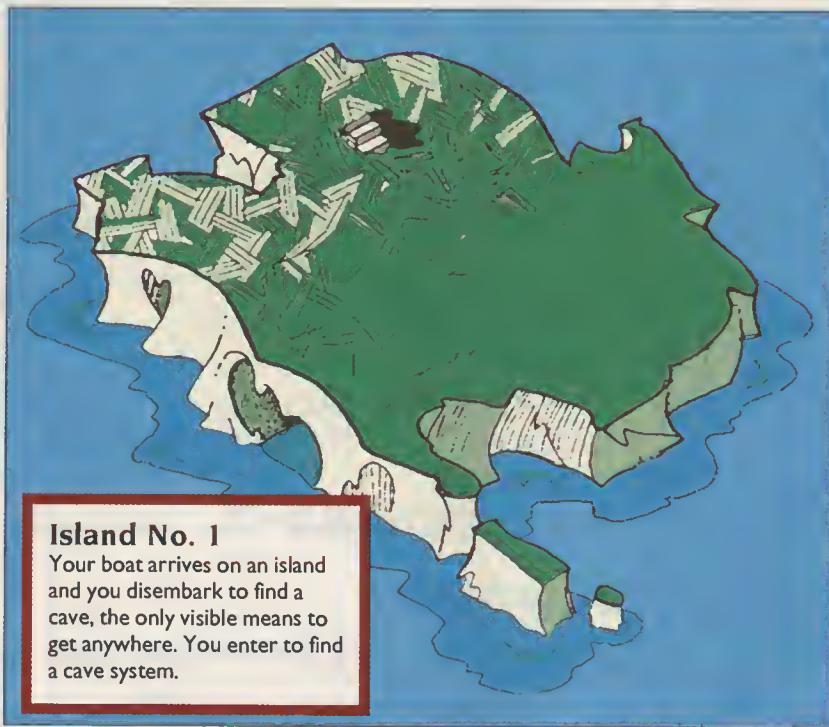
Eternam

Eternam



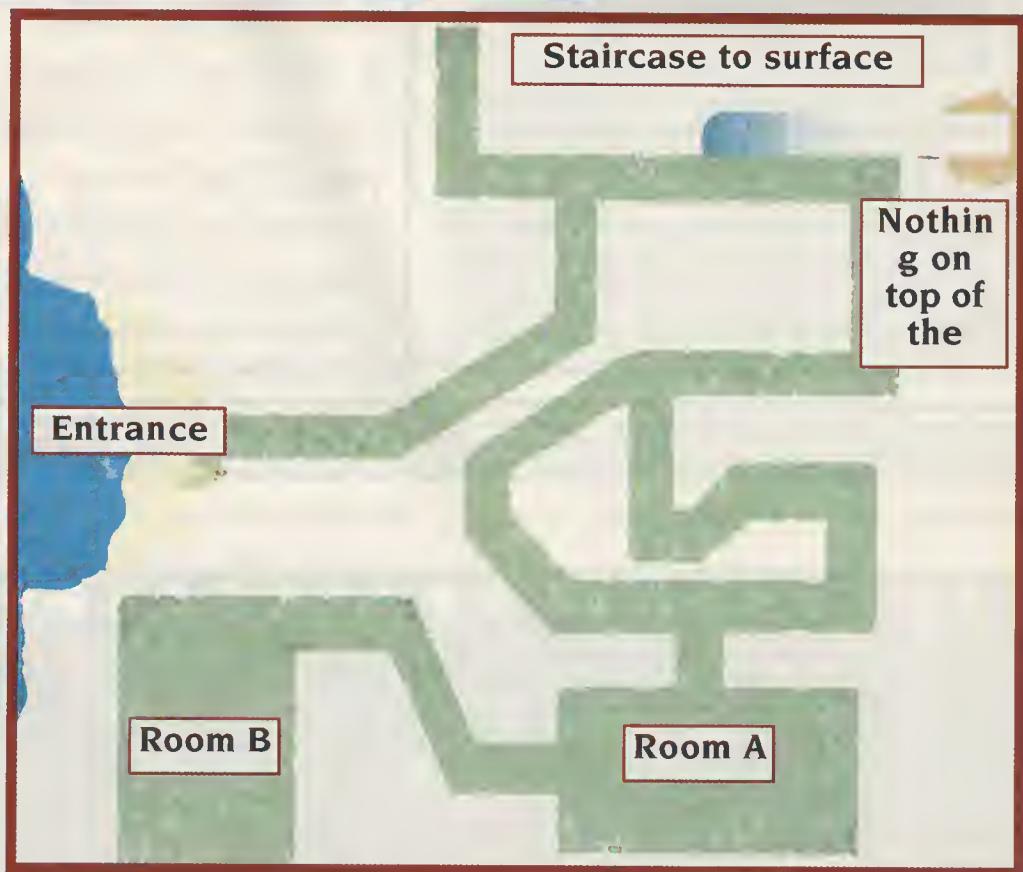
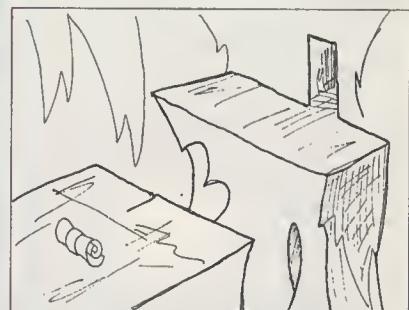
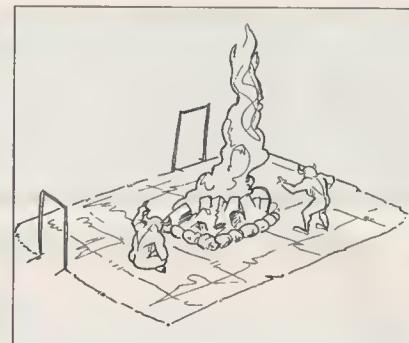
QED

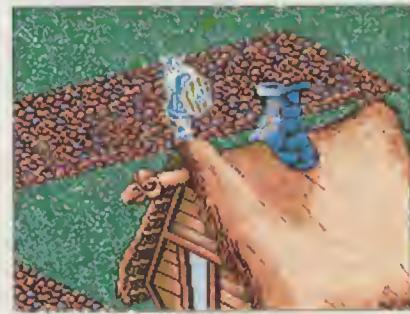
Continuing our ever-expanding tips section, this month we bring you the first part of a complete guide to Heimdall, a run-through of Star Trek: 25th Anniversary and the final part (hurrah!) of our Gods guide. Plus all the usual cheats, tips and helpful hints.



Core Design's mythological tale of Norse warriors and ancient gods is proving to be too much of a challenge for most. Thanks to the programmers themselves, we can now bring you a monthly guide to each of the main islands in the game.

HEIM



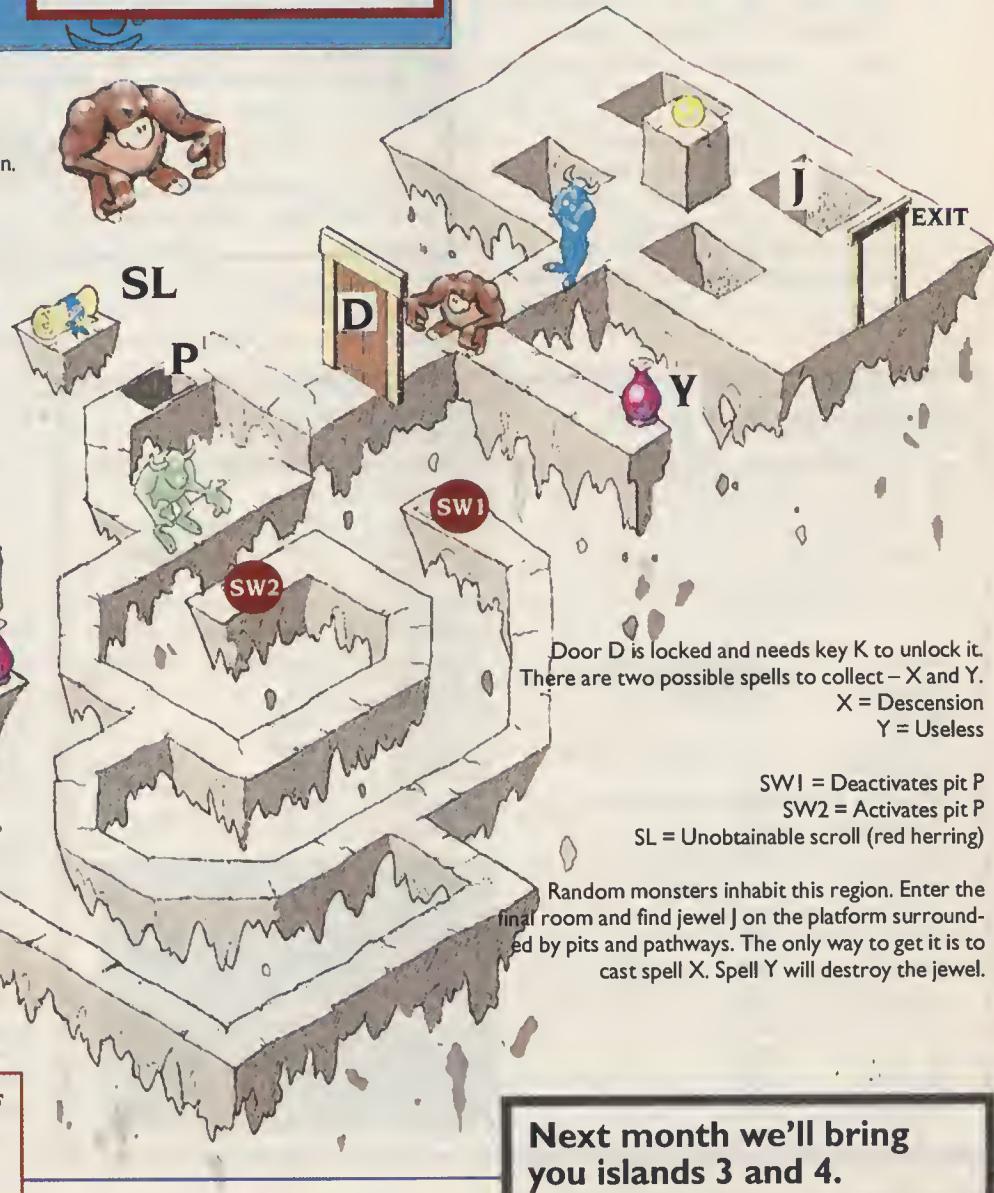


Island no 1

The underground maze section is reached through the village of Trelleborg. Journey through and leave via the Druid's hut. If you hadn't come via the Dolmen first and collected some herbs, the Druid will attack.

The game starts at point A. Three pits block the way. In front of you are six switches, each activated by being stood on. Each activates or deactivates a combination of pits:

Switch A = #1 off, #3 on
Switch B = #1 on, #2 on, #3 on
Switch C = #1 off, #2 on, #3 on
Switch D = #1 on, #3 off
Switch E = #1 on, #2 off, #3 on
Switch F = #3 off



Switches A to F (from top to bottom)

Next month we'll bring you islands 3 and 4.

Twilight 2000

North Hamberside is renowned the world over for breeding some of the toughest post-apocalypse freedom fighters. Neil Thomson offers these tips for saving the day in Paragon's RPG:

Firstly, it is important to select a good platoon from your squad. The default squad works fine and it is inadvisable to create your own as essential skills may well be missing.

Always save the game at regular intervals because the language skills of your characters are vital and for this reason you cannot afford to lose any of them. You need to communicate with NPCs on every mission. If you can't understand them the game comes to a frustrating end.

Combat can be made a doddle by selecting Nick, Terri and FJ for each mission. When hostilities commence, use Nick and Terri as normal but when asked to select an action for FJ, order him to flee. Then immediately restart combat and repeat this until all the enemy are dead. They will not get a chance to fire at you so you are invincible – kill at will!

It is vital to collect all the supplies you can but you are limited by the amount your characters can carry. This problem can be solved by positioning your character directly in front of and facing the object you wish to take and instead of selecting the pick up icon, select the inventory option. On the ground will appear the objects you wish to take and now you can pick them up manually and place them into the inventory of your characters. This way you can carry as much as you like.

Space Ace

Thanks to D Watson of Bolton, all you desperate Dexters out there can now battle through to the end of Readysoft's cartoon caper. You'll still have to get the timing right yourselves but at least you know which way to go:

Scene 1	Left, right, down
Scene 2	Down, up
Scene 3	Up
Scene 4	Right, right
Scene 5	Right after the
Basher has come down once, then up	
Scene 6	Fire
Scene 7	Down, right
Scene 8	Down, left
Scene 9	Fire
Scene 10	Up
Scene 11	Up
Scene 12	Right
Scene 13	Up
Scene 14	Right
Scene 15	Left
Scene 16	Left

Scene 17	Right
Scene 18	Up
Scene 19	Fire, right
Scene 20	Fire
Scene 21	Fire, right
Scene 22	Fire, down (quickly!)
Scene 23	Fire
Scene 24	Up, down
Scene 25	Left, down
Scene 26	Up, left
Scene 27	Up
Scene 28	Right
Scene 29	Right
Scene 30	Left
Scene 31	Right
Scene 32	Left, right



Wing Commander 2

Following on from last month's cheat mode, someone going by the fancy monicker of Capt. Ghost Rider offers these titbits:

- When engaging multiple fighters and you have no wingmen, lock-on to the closest fighter and concentrate on him alone. If he runs away from you and doesn't change direction, don't follow him. Lock-on to another ship (he'll be back) otherwise the bogeys will get on your tail and do significant damage.
- When fighting heavy fighters, lock-on to the first oncoming target at about 7500km, fire a Friend Or Foe missile so that it hits him at about 5000km. Then fire a gun barrage. If he survives, at 2000km fire a Dumb Fire missile. He won't escape.
- When fighting a capital ship's escort, try to draw them away from the capital ship otherwise the massive firepower will weaken your shields and make you too vulnerable.
- Never follow a heavy fighter's tail. Their turret guns will do some serious damage to your ship.
- When fighting Jazz use all your missiles on him and he shouldn't survive. Never use the rear turret against him, he's way too fast (this also applies to Prince Thrakkath).
- Prince Thrakkath has four missiles (very accurate ones too) so try to use the two chaff pods followed by afterburners to evade them. Keep an eye on him though, he's tricky and will try to attack you while you perform the evasive manoeuvres.
- You don't need to destroy the starbase to win the game, just destroy Trakk and the five Drakky.

We were going to send a prize to the Capt. but he forgot to include his address (and real name) with his letter. Can the real Capt. Ghost Rider please get back in touch with us (and just to prove it's really you, please include your signature and your kills/mission ratio as proof). A piece of software is waiting!

It took me 66 missions to finish the game and the final mission is always an attack by Czarny on Krakow so beware!

Links

“Here is the ultimate cheat," says Michael Hurt of Surrey. "You will now be able to play a round of golf on any of the Links courses and only take two strokes per hole.

"Once the game has loaded and you're on the tee, select the drop option. You will then be presented with three choices:

Hit from this position, select another position or back up 50ft.

Choose select another position, then move the cursor as near to the green as you can. Repeat this procedure until you are a few inches from the hole. Select hit from this position and play your shot. The flag will still be in place, but you will still be able to make the putt. Remember to select the putter before you take the shot.

"You can also use this cheat if you're unfortunate enough to play your shot into the water. Select drop from the menu and follow the same procedure to the hole. You will of course still be penalised for the water fault but at least you won't have to take any more shots to get to the hole."

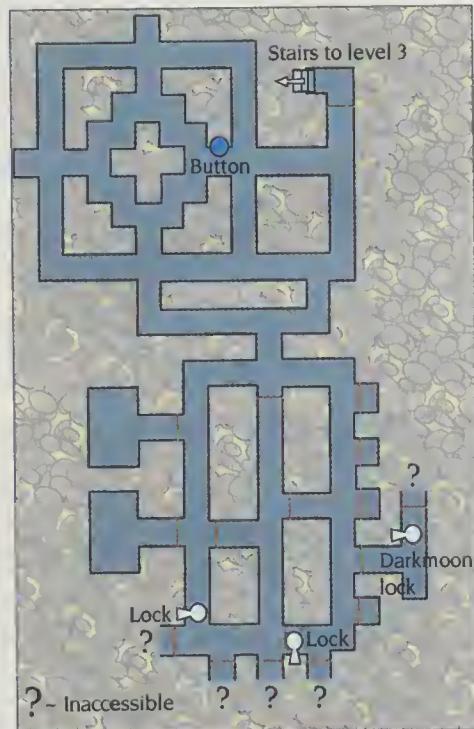
This is all very well, Mr Hurt, but I always thought the cornerstone of golf was honesty and fair play? Still, I guess we can't all be Nick Faldo. A prize is on its way to you (probably PGA Tour Golf to stop you cheating).

REQUESTED

After last month's expanded Help Wanted! page (the replies to which we're still sorting through — look out for them next month) we're back to our regular half page size. Our first query might look a little bit familiar as it was originally printed last month, but without the map that went with it. So in order to help A Ranade of St. Albans with his dungeoneering dilemma look below.

EYE OF THE BEHOLDER 2

A Ranade of St. Albans is stuck on this section of level four.



He can't find any useful keys, can't rest his party and doesn't know what the button on the wall does.

Also stuck in Darkmoon is Paul Ovey of Tewkesbury. He wants to know how to open the door in the room with all the pressure pads on level 4 and where the second Darkmoon key is.

MONKEY ISLAND 2

Brent Phillips is only 11 (aah!) and is having trouble winning the spitting contest, working out what to do with the organ and opening the trap door on Phatt Island. Help the young scallywag out (forgive me for being patronising about your age, Brent, but it usually helps to bring a speedy reply)!

CORPORATION

A man with more than his fair share of space-related problems is Daniel Halford of Colchester. Firstly, he's been walking around on level three (the ground floor and security access level 2) when the screen suddenly fades to black and the message "You have been incarcerated" appears over and over again. Secondly, he doesn't know what several objects do, the ones with the word Holo and the letters B or C after it. That's life, huh?

MEGAFORTRESS

We don't get many queries for flight simulators but it's the Flight Of The Old Dog mission that's causing problems for J A Kaye of Sleaford. He can't perform a 'sleight of hand' over Seattle and would appreciate any help.

SPIRIT OF EXCALIBUR

It's been a hard day's knight for Mr P Beckett of Great Yarmouth with Virgin's historical romp. He can't find Lancelot Du Lac in episode 2. Have you seen this man? He was last seen in the vicinity of the Round Table in Camelot and Mr Beckett would like him to help with his enquiries.

DRAKKHEN

Peter Brown of Poynton in Cheshire would like to know what to do with all the tears he's been collecting. I suggested making a cocktail but it didn't go down at all well (neither did the drink come to that).

SUPPLIED

COUNTDOWN — Paul Freeman, Plymouth

To get out of the torture room, writes Tom Ranheim from Norway, you simply move the second bottom brick on the left of Hakeem Ababash, revealing a secret door. Before you leave the room you must read the newspaper, move the sack, get the postcard, the blueprint, the rod and the bag. If you use the CAD to analyse the postcard you'll find a micro-dot.

KING'S QUEST III — Jane Eaglen, St. Albans

According to Daniel Robson of Stoke Newington, the best way to get past the path is to go into the first cave (after you've climbed down the cliff). When you come out, set the game to the slowest speed and go right to the very left of the ledge. Walk into the cliff and you'll start climbing. Climb down to the right hand side and go into the next cave. Climb up the next cliff and go right on to a ledge and into another cave. This will put you at the bottom of the screen.

SORCERERS GET ALL THE GIRLS — Lawrence Harper, Redhill

Nigel Polhill of Ealing is the man to thank for getting Mr Harper out of the maze. Quoteth he: The letters in the maze spell THIS WAY OUT. Trace your way through it in this order, starting with T then H and so on. The full sequence is — SE, S, E, E, SW, W, S, W, W. This will get you to the meeting room where you will find something to help you retrieve the surfboard. Then just retrace your steps.

THE ADVENTURES OF WILLY BEAMISH — Matthew Lynd, Godalming

Of the 4,082 replies we had to this problem, Claire Davis of Birmingham was the one picked out of the bag. After the baby sitter turns into a bat, go upstairs into Brianna's bedroom. There is a cat on the red chair with a mouse in its paws. Get the mouse and go back downstairs and behind the sofa. Throw the mouse on to the table and the bat should land on it. Shoot at the bat a few times to kill it.

P C Review is now offering a free piece of software to everyone who gets a tip printed on this page. If you've any helpful advice, discovered any cheat modes or are just an all-round know it all, then send your tips to: QED TIPS, PC Review, EMAP Images, 30-32 Farringdon Lane, London, EC1R 3AU. Don't forget to mark your envelope QED TIPS as we're having an awful time trying to sort out what's what in the postbag. Also, specify what kind of game you'd like (although we can't send out any specific requests, sorry. Just tell us the genre please), along with what type of machine you have, what type of disk drives you have (including CD-ROM!) and any games you really don't want.

Space ... the final frontier. These are the voyages of the starship Enterprise, its continuing mission to explore strange new worlds, to seek out new life and new civilisations. To boldly go where no man has gone before.

DEMON WORLD



Captain's Log, Stardate 4731.8: The Enterprise has been sent to Pollux V to investigate reports of ... demon attacks. I have consulted Mr Spock as to the cause of such reports, but aside from relating the ship's computer records on demonology, he's come up empty. As always I remain sceptical as to the nature of such demons, but must bear in mind the prime directive when dealing with the planet's inhabitants.



Hoving spoken with the High Prelate Robert Angiven, I have beamed down to the surface with Mr Spock, Dr McCoy and Security Ensign Everts. After going through the usual formalities, High Prelate Angiven has asked us to investigate the caves to the north. Bones suggested we talk to some of the colonists inside the complex first. Agreeing with him we discovered that one of them was fatally ill. Only some berries found near the caves will provide the cure.



Spock suggested that our most logical course of action was to check out the caves for ourselves. We'd barely reached the entrance when the so-called demons attacked. We returned fire and managed to disable these Klingon robots. During the firefight a hand came loose from one of the robots. Spock suggests keeping the damaged limb for later analysis. In the meantime we are about to explore the cave entrance to the north.



Proceeding to the cave entrance, Bon managed to find some of the berries needed for the colonist's cure. We've taken them back to the laboratory next to the colonists complex and used the medical synthesiser to produce the medicine. Mr Spock performed surgery on the robot hand. Questioning the colonist about the plan he's offered to let me take a few Spock 'souvenirs' in case they come in hand.

HIJACKED



Captain's Log, Stardate 4842.5: Starfleet reports that the USS Mosodo has been attacked and hijacked by a band of Elosi pirates. The Enterprise has been sent to rescue the crew, apprehend the criminals and bring the whole situation to a peaceful close. After arriving in the Mosodo's reported vicinity we were attacked by an Elosi fighter but managed to drive it off before it could do any serious harm. Seems like the pirates want to keep their booty.



Our first step is to find a way on board the Mosodo, not an easy task as beaming aboard is prevented thanks to her shields being raised. If Mr Spock can find the Mosodo's prefix code from the computer files, Mr Sulu could lower the shields from here just long enough for myself and a security team to beam over. We could also just open fire on the bridge but the pirates would be bound to kill the hostages before we'd get close to rescuing them.



I decided to beam aboard quietly and we've arrived in the Mosodo's transporter room to find it completely wrecked. Bones has revived the injured transporter chief, who in return has given us a Runcinate Transmogrifier, a device which Spock can use to temporarily repair the transporter beam. With this working we could set up a short distance beam on to the bridge of the Mosodo and surprise the Elosi, forcing a surrender.



Spock needs to find some more materials to repair the transporters so we've made our way into the corridor to scavenge phaser wires and tools. Amongst the debris we've found wires, rods and a phaser which Spock combined my own phaser with the welding rods into a suitable 'bit' for the transmogrifier. Spock attempted to fix the wires to the transporter but found he needs yet more.

LOVE'S LABOR JEOPARDIZED



Captain's Log, Stardate 4926.1: Space Station Ark-7 has failed to communicate with Starfleet for several months so the Enterprise has been ordered to find out what's going on and help with any repairs that may need attending to. Upon reaching the Ark-7 system however, we've been attacked by a Romulan warbird. I get the strange feeling that this isn't going to be a simple case of communication malfunction.



One Romulan down, several more to go. We've reached the space station only to find it under siege from another warbird. The ship's captain, Romulan Centurion Preox, has threatened to destroy the complex claiming it to be some kind of germ warfare plant. Dr Carol Morcos, the station's chief scientist, has always been firmly opposed to the military and I can't see this being true. I'm beaming aboard with Spock, McCoy and Lt Ferris.



The station's bridge has been deserted, allowing Spock and Bones to rifle through the computer database. With the Romulans holding the lower levels, it might be worthwhile finding a way to knock them out. Bones has also discovered that a rare virus has infected the station's air supply and is affecting Spock. Finding a cure for this disease is now my number one priority and Bones suggests exploring the rest of the complex.



The science lab to the north revealed a method for creating gases and liquids using an anti-gravity unit to carry the container. The engine room turned up a very useful sponger, a canister of nitrogen and some insulation which can be used to make a repair. Using the insulation on the distillation unit in the science lab we created an omnigrid of polybetylcarbanate. We also found a sample of the virus in the freezer unit. We're heading back to the science lab to

and these are the voyages of the starship QED, its continuing mission to bring solutions to the toughest of games. What follows are extracts from the log of Captain James T Kirk from the period that has become known as the 25th Anniversary missions.



Heading back far the caves we countered a large daarway blacked by rocks. Working from the top down I worked away with my phaser revealing natly the daar, but a wounded calanist. I'm giving him aid while I work an opening this daar with the help of the robot's hand. The small panel is similar to a daar panel on the Enterprise and if the robot's theory is correct, the robot's hand should operate it.

Spack suggests that this strong workshop is some kind of alien life-support system. I've discovered that one of the alien artifacts fits into a slot like a key but even Spack doesn't have enough strength to turn it. Also, if, as Spack suggests, this computer is linked to the eclipsing of Pallux's moon and if that diagram is anything to go by, I would guess that these controls need to be centred for the machine to activate.

The diagram was correct and having applied power to the computer systems, we managed to wake an alien life form from its millennia of sleep. I've greeted this new race in the name of the Federation and he has managed to turn the key in the lock, thereby deactivating the robotic defence systems. With an invitation to join the Federation and a promise to compensate the calanists, the away team has beamed back aboard the Enterprise.



Captain's Log, Supplemental: Starfleet were pleased with the successful outcome of the mission and the safe return of the away team. Pallux V taught us something about human nature and I guess we all have demands of our own to encounter. For the calanists it was a fear of the unknown, for me it's what the future holds for the human race, for Spack it's coming to terms with his human 'failings' and for Banes ... it's that damned green-bladed Vulcan!



Entering the Masada's brig we took a couple of Elasi guards by surprise. With phasers at stun we've eliminated the pirates and are working our way to free the crew. Unfortunately the controls to the cell have been rigged to a local area bomb which is set to detonate if anyone tries to disable the forcefield. One wrong step and we might kill all of the Masada's trapped crew. Lt Christensen mentions that he's been trained in explosives.



Christensen was able to remove the wiring connecting the bomb to the controls. Taking both items we've released the crew who will stay here to guard the stunned pirates. One of the crew informed us of a forcefield that's surrounding the bridge, as well as the correct way to dismantle it. I'm working on that right now thanks to the phaser welder. With this forcefield still in place we'll never be able to beam aboard.



Returning to the transporter room, Spack has managed to fix up the short distance beam to the bridge. Despite McCoy's reservations we've arrived on the bridge and ordered the Elasi to surrender. Having been taken completely by surprise they've realised there's no escape and Cereth, the pirate leader, has ordered his men to comply. Having lowered the shields, Mr Scott has been able to beam over a security team and take us back.



Captain's Log, Supplemental: With the Elasi under custody and preparing to serve a long sentence for kidnapping, murder, piracy and numerous other offences (and the grateful appreciation of Starfleet received), the Enterprise is preparing to set course for our next destination. Imagine trying to take over a Federation starship. Although we never learned their reasons, I've no doubt we'll be hearing from the Elasi before too long.



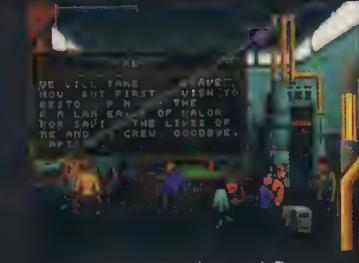
Creating some water with the oxygen and hydrogen tanks on the synthesiser, we've now replaced the oxygen tank with the nitrogen to create some ammonia. Taking the virus sample, we're attempting to use the replicator in the other room to create a cure. Adding the ammonia to the nozzle and putting the virus into the chamber Banes managed to create a sample of the cure. Not enough to treat anyone with but he is confident he can quickly create more.



We're almost there! Putting the cure sample into the synthesiser and using the Hydrogen and Nitrogen tanks has produced enough of the cure to affect Spack and the Ramulans. Now for the Ramulans. Using the polyberylcarbanate in the synthesiser with hydrogen and oxygen tanks has produced a quantity of TLTDH - the Ramulan laughing gas. Putting this through the air vent in the engine room has knocked out the guards downstairs.



Banes evaluation of the Ramulans reveals that they are generally okay but are severely dehydrated. Creating plenty of water with the synthesiser and the Hydrogen and Oxygen tanks and using the cure to save the Ramulans, Banes suggests letting them drink enough to survive. Personally I'm more concerned about freeing Carol from her private lab to the north. Luckily the Ramulan in there has been knocked out too.



Captain's Log, Supplemental: Due to our honourable actions in rescuing the Ramulans as well as the station's staff, and thanks to Carol's explanation of the accident with the virus culture, Centurian Preax has awarded me the Ramulan medal of honour. If this doesn't ease our negotiations for galactic peace then nothing will. I'm just glad to have played my part. Mr Scott is preparing to beam us back onto the Enterprise.

It's been one mighty long journey but we've finally made it to the fourth level of the Bitmaps' legendary Gods. Before you embark upon the last few steps between here and immortality, we'd just like to thank everyone at Renegade/Bitmap for all the help they've given us in bringing these maps and tips to you.

Level 4

World 1

Make your way to the top of the room and destroy the block that the door key is resting on.

Collect the key and pull lever 2. Go through the door.

Drop down through the opening above the trap. A moving block will appear and save you from falling on the spike.

Go through the door on the right, jump across on to the ladder and climb down.

Destroy the blocks to your left then pull lever 4. Use the zap to kill the monsters then climb back up the ladder to get the room key.

Go down to lever 5 and pull it to enter the trap room.

Quickly jump up to your left and pull lever 6. This stops the moving block from knocking the world key into the traps. If it does you will need to get use the trap key to get the bomb to destroy them.

Exit the room and then make your way up to the world end by lever 11.

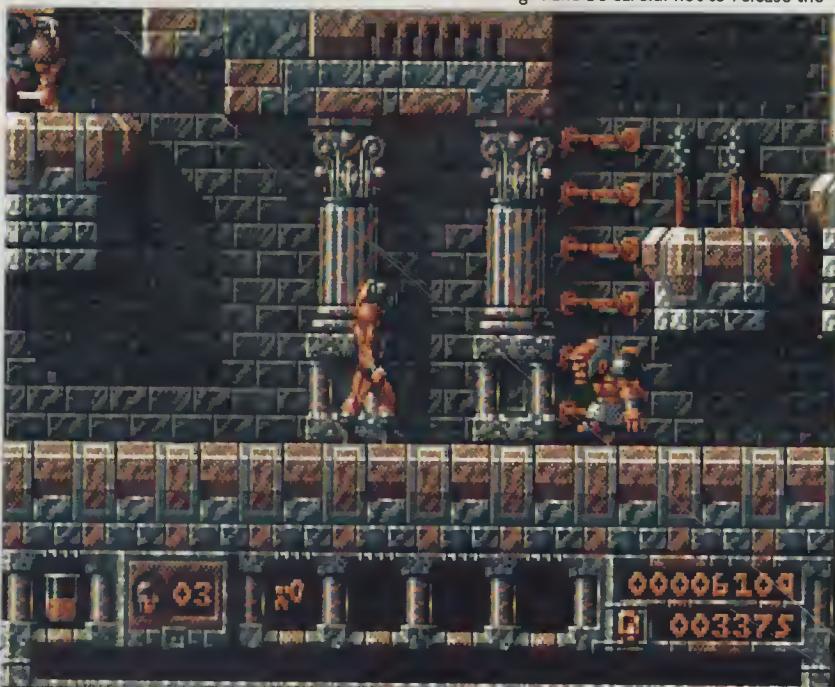
Hidden puzzles

1. To find a gold treasure chest.

Use the trap key from the trap room to move block 2 and go down into the pit. There is a gold treasure chest here. You will be also find another trap key to move block 3.

The Shop

Buy maces, fireballs, hunters, power potions.



World 2

In world 2 you must collect the three alchemical implements and return them to the alchemists room. Go right, down the stairs and jump on to the breakable blocks.

Walk right and be careful not to release the

trapped monsters.

Down the ladder and collect the gold bowl.

Enter the room by lever 7.

Go lever 9 to blow up the trap. Collect the alien attract potion on the way.

Pull lever 8 to trigger the thief who will be carrying the pestle and mortar.

Go to lever 10 drop the potion to attract the thief.

Kill thief and take the mortar.

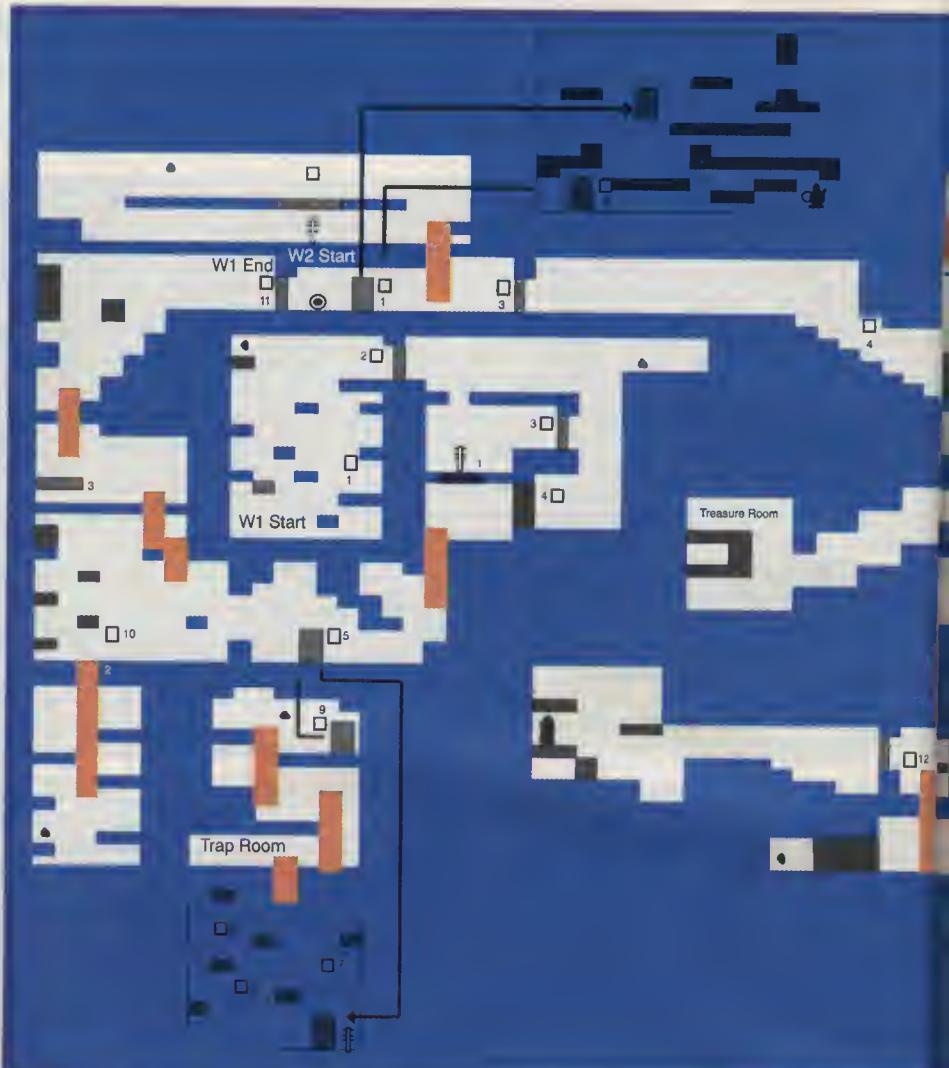
Pull lever 6, go left and pull lever 11 and drop down.

Go to the bottom of the map and collect the door key from behind the breakable blocks.

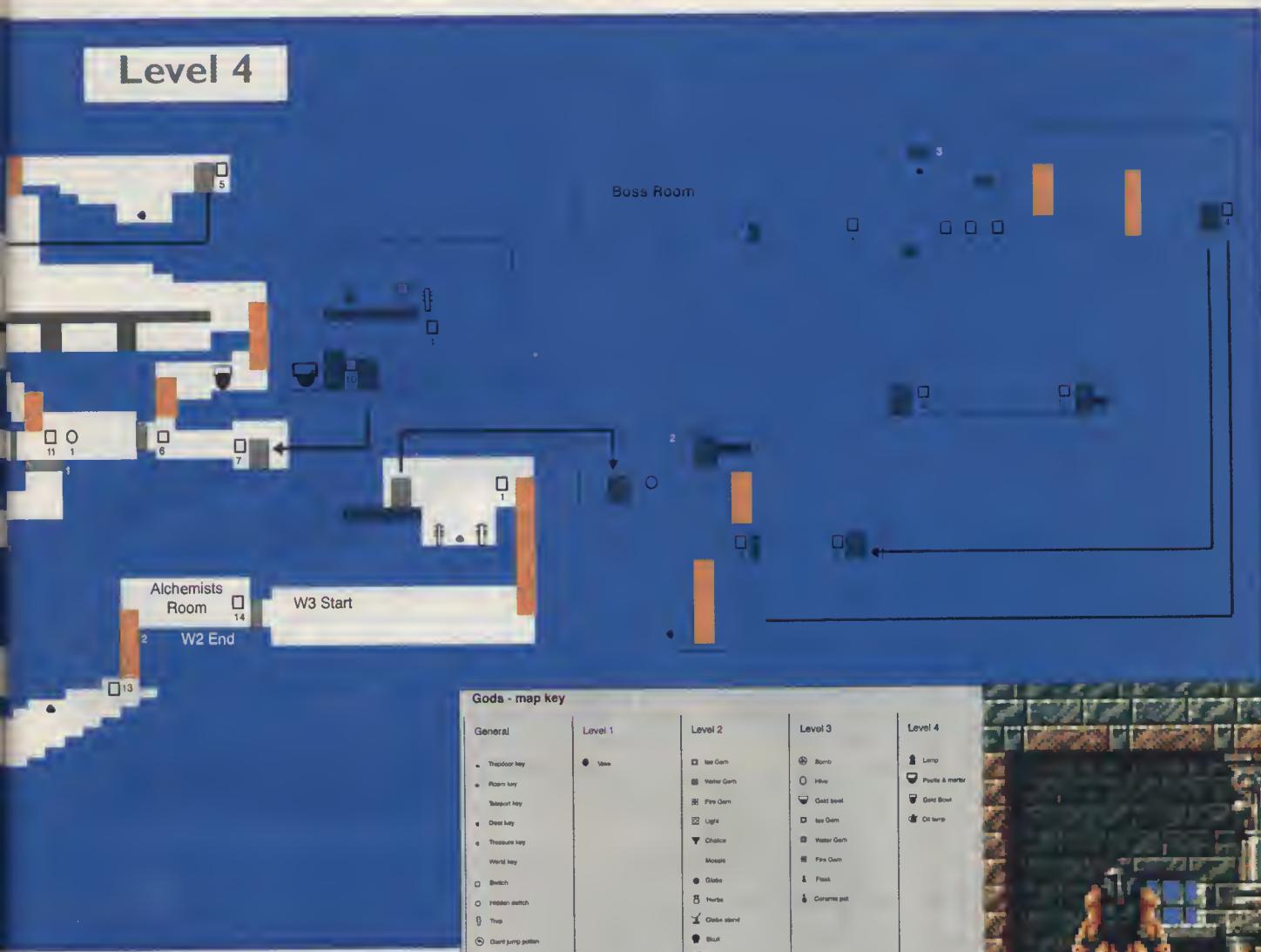
Back to lever 12, pull, enter room and collect the lamp.

Pull lever 13 to reveal a trap key to move block 2.

Enter the alchemist's room collect the world key and exit the door to the right.



Level 4



Hidden puzzles

1. To enter the bonus section.

There is a bonus section which can be entered by collecting the room key from the section above the first door and pulling lever 1 once collected.

2. To find a free familiar.

Collect the oil lamp from the bonus section and pull lever 4 to get a familiar.

World 3

In this world you simply need to find and collect the world key.

Go left and kill the dog which appears at the bottom of the first ladder to reveal a spear. You will need to be carrying this when you pull lever 1 to move block 1. Reset lever 1 and go through the door to the left.

Go right and down the ladder.



Gods - map key

General	Level 1	Level 2	Level 3	Level 4
<ul style="list-style-type: none"> Trapdoor key Room key Transport key Door key Treasure key World key Switch Hidden switch Trap Giant jump potion Shop keeper Alien attract potion Moving block Breakable block Trapdoor Transport stone 	<ul style="list-style-type: none"> ● Ideas 	<ul style="list-style-type: none"> Ice Gem Water Gem Fire Gem Light Chalice Mosquit Globe Herbs Globe stand Staff Um Cross Candle 	<ul style="list-style-type: none"> Bomb Hive Gold bowl Ice Gem Water Gem Fire Gem Peak Coranite pot 	<ul style="list-style-type: none"> Lamp Poste & mortar Gold Bowl Oil lamp 

Pull lever 2, then 3 and through the door to the right.

Go to lever 7 and pull it.

Return to lever 4 and go back through the door.

Collect the world key and go up the ladder. This takes you back to the left of lever 2.

Make your way to lever 8, pull it to enter the final guardian's room.

Hidden puzzles

1. To get the treasure key.

When you get to lever 1, don't kill the thief and he will bring you the treasure room key. You will find the treasure room by dropping down the trap door by lever 7 and going through the door at the bottom of the pit.

2. To get the axes.

To move block 2 and get the axes you need to do the following.

You need to get the thief to get the mace from above levers 5, 6 and 7.

Pull lever 7 to open the trap door.

Pull lever 6 to move block 3 to knock the trap key into the pit below.

Reset lever 7 to close the trap door.

Pull lever 5 to open the trap door by the thief.

Wait for thief to collect the mace and come down to you.

Kill thief, then collect mace.

Pull lever 7 to open trap door and collect the trap key.

You will now be able to move block 2 and use the mace to break the blocks to allow the axes to be dropped. This will make it far easier to kill the final guardian.



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The COMPLETE guide to PC entertainment BACK ISSUES

"The Amstrad PC5286 Games Pack certainly scores in terms of size, packing all the basic components you'll need into a compact stick-it-almost-anywhere unit"



"A virus isn't anything special. The first version of Jerusalem had a bug in it; the Stupid virus often doesn't infect PCs properly because it's so badly

"Our extensive playtesting tends to slow development down a little. We've invested over 2,000 hours playing Populous II for example," says Bullfrog's Peter Molyneux



"You can, of course, make up your own multimedia system by adding to your own equipment or specifying it when you buy your computer"

"Soaring peacefully in civilian skies may be politically correct, but most of us would rather annihilate something with six feet of high explosive tipped steel"



"The combination of demos and information instantly available on the Windows screen means that you may never need to bother with the manual again"

"Do not even think of buying a machine below a 286, and, if possible, buy a 386SX or 386. PC games are increasingly being written to run optimally on a 386"



"In theory, the PC games pack should give you everything you need at once, ready configured, so that you return to the plug-in-and-go philosophy"



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ISSUE 1

Amstrad 5286 Games Pack reviewed; Civilization; Kid Pix; TecnoPlus CD-ROM drive; Tips for Eye of the Beholder, Heart of China; Top 100 Classic Games supplement (pt 1).

On disk: Faces, Blues Brothers, Music Maestro, Iokeware.

ISSUE 2

Bullfrog profile; PC gadgets; First Steps in MS-DOS; Readers' Top 50; Ultima VII, Patton Strikes Back, Pro Tennis Tour 2, Police Quest 3; Readers' Top 50 games; More tips for Eye of the Beholder, Heart of China.

On disk: Powermonger, Pit-fighter, Sleuth, Typing Tutor.

ISSUE 3

No-nonsense guide to buying a PC; First Steps – fitting a hard disk; Electronic Arts On the Spot; Secret of Monkey Island 2, Powermonger, Cadaver; Tips for Savage Empire, Immortal.

On disk: Lemmings, Gods, Gallery.

ISSUE 4

Protect yourself from viruses; First Steps – MS-DOS; Miracle keyboard; EOTB 2, Chessmaster 3000, Gods; Tips for Conquests of the Longbow and Might & Magic III; Top 100 Classic Games Supplement (pt 2).

On disk: Fingerpaint, Moraff's Superblast, Gallery.

ISSUE 5

CD-ROM – the future for games?; First Steps – fitting a soundboard; Darkseed; Midwinter II; Flames of Freedom; Shuttle; Twilight 2000; Thunderhawk; Tips for Eye of the Beholder II.

On disk: Supaplex, Hugo's House of Horrors, Gallery.

ISSUE 6

Windows: freedom from the DOS prompt; First Steps – upgrading to VGA and beyond; chess machines and PC chess programs; On the Spot: US Gold; Cruise for a Corpse; Star Trek; WC2 on CD-ROM; Tips for Longbow and Gods.

On disk: Darkseed, Blox, Gallery.

ISSUE 7

Essential guide to PC flight sims; First Steps: upgrading your processor; Ad Lib Gold 1000 soundboard; Disney Animation Studio, Another World; Sherlock Holmes on CD-ROM; Tips for Monkey Island 2, EOTB 2, more Gods.

On disk: Another World, Timelord.

ISSUE 8

PCs configured for games; SSI's war games; First Steps: adding memory; Ultima Underworld, Dune, Super Tetris, King's Quest V on CD-ROM; Tips for Star Trek, Civilization, more Gods.

On disk: European Championship Soccer, Treacles Utilities.

We don't want PC Review's cover disk to be deadly serious every issue, so this month we've lightened the tone with two playable demos of forthcoming 'cute' platform games and two complete games. Magic Pockets, Cool Croc Twins and Wilf II should cater for most gaming tastes, but if you don't like action games, why not try the European version of Draughts played by Dynamo? It is 1992, after all ...

MAGIC POCKETS

Following their hugely successful Gods demo, the irrepressible Bitmap Brothers have once again put fingers to keyboard for PC Review and produced a playable level from their forthcoming cute platform game, Magic Pockets.

The Bitmap Kid has had his toys stolen by the strange creatures that inhabit the huge worlds inside his magic pockets. The only way he can retrieve them is by entering his own pockets



and doing battle with the denizens of those cavernous containers.

In this level, the cave, your task is simply to get from the start to the exit. Each time you collide with a monster you will lose a life, and, once five lives are lost, the game is over. The number of lives in reserve is indicated by the number of fingers held up on the left hand.

The Kid can fire whirlwinds to destroy the monsters. Some monsters are killed outright by a single small whirlwind, others will only be stunned and will have to be hit more than once before they die. You can build up the power of a shot by holding down the fire button and then releasing it to fire. The strength of a shot is indicated by the size of the right fist.

If a monster is hit by a full size whirlwind it will be captured for a short while. Move into it to turn it into bonuses. Gold and silver stars can be collected for a special bonus weapon, which will appear automatically when you have collected enough. Other bonus objects can be collected for points.

To pick up a helmet or bonus weapon, move over it and push the joystick down. If you enter the bonus room, collect as many bonuses as you can before your time runs out and you are returned to the game.

The Kid can make himself temporarily invincible by going into

CONTROLS		
Joystick		Keyboard
Left	Move left	Left arrow
Right	Move right	Right arrow
Up	Jump up	Up arrow
Down	Pick up	Down arrow
	helmet/bonus	
	weapon	
Fire	Fire whirl-	Insert
	wind/bonus weapon	

TECH SPEC

CGA <input checked="" type="checkbox"/>	EGA <input checked="" type="checkbox"/>	VGA <input checked="" type="checkbox"/>	Tandy <input checked="" type="checkbox"/>
Hercules <input checked="" type="checkbox"/>	Roland <input checked="" type="checkbox"/>	Ad Lib <input checked="" type="checkbox"/>	
HD <input checked="" type="checkbox"/>			

How to load the programs

Those who are experienced PC users should check the quick installation guide below. If you're unsure how to proceed, read through the step by step instructions in this panel.

Quick installation guide

Put the PC Review cover disk into your floppy disk drive and log on to it. Type

FRONT [Enter]

to start the menu and follow the on-screen prompts. When the program(s) have installed, log on to the relevant directory, and type the following to start the programs.

Magic Pockets:
POCKETS [Enter]

Cool Croc Twins:
PLAYCOOL

Wilf II:
WILF [Enter]

Dynamo:
DYNA29SH [Enter]

Step by step instructions

1 Put your PC Review cover disk into your floppy disk drive.

2 Log on to that drive by typing

A: [Enter]

if your floppy drive is drive b:, substitute b: for a: in the example above, eg. B: [Enter] to log on to drive B:.

3 Type the following:

FRONT [Enter]
to start the cover disk menu program.

a spin. Do this by creating the largest whirlwind and then walking into it. The Kid automatically goes into a spin when he falls a long distance.

To finish the demo, move into the open doorway at the end of the level.

When you load the demo, if you do nothing, it will automatically go into demo mode. You can start playing by pressing the fire button. To change the graphics, sound and control options type:

SETUP [Enter]

and change the required options using the menus.

The Bitmap Kid's Patent Pocket Identification Chart



Me (The Bitmap Kid)

Typical monster

Small whirlwind

Large whirlwind

Bonus object

Bonus star

COOL CROC TWINS

For the Cool Croc Twins, coolness is a way of life. In fact, Punk Croc and Funk Croc are so effortlessly cool that Daisy Crocette has fallen head over heels in love - with both of them! She is torn between the rough diamond charm of Punk Croc and the easy-going, laid back attraction of Funk Croc.

It's all too much for a Crocette to handle, and to avoid disappointing one or the other of the Croc Twins, she runs away, vowing to love them both from afar.

But the croc twins are having none of that! What's the point of being a Cool Croc without a Crocette to tell you how cool you are? Vanity is a Croc's second most important attribute; after coolness of course!

So Punk and Funk set out, shouting 'Faint heart never won fair Crocette' to spur them on. Through four levels they must pursue the Crocette that loves them; they would love her back if it wasn't so uncool!

This playable demo contains four levels from Arcade Master's forthcoming game published by Empire. The complete game will contain 10 worlds and 60 levels.

In each level your aim is to light all three lights on each of the boxes. You do this by jumping into the boxes. Once all the boxes are lit you will go to the next screen.

Avoid the nasties while you are on a platform, but they can be safely hit and destroyed for points if you hit them while jumping. Sometimes the nasties will switch off lights you have already lit.

The strange gravity in Cool Croc Twins takes some getting used to. Each platform has its own local gravity, so you can walk on either side of a platform.

Each level also contains a variety of special objects. You will have to experiment to discover what each of these does when you jump into it.

When you start the demo an options screen appears. Make sure that you set the sound, control and difficulty options that you require, before starting the game by selecting the appropriate graphics mode.

CONTROLS

Move clockwise	Joystick left
Move anti clockwise	Joystick right
Jump	Fire button

TECH SPEC

CGA	EGA	VGA	Tandy
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Hercules	Roland	Ad Lib	
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
HD			
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	

directory (if you did change the drive and directory names, don't forget where you put them!):

C: [Enter]
CD POCKETS [Enter]

will take you to the POCKETS directory on drive C:

10 Type the following commands to start the programs:

POCLES [Enter] to play Magic Pockets
PLAYCOOL[Enter] to play Cool Croc Twins
WILF[Enter] to play Wilf II
DYNA29SH[Enter] to view the Dynamo.

4 Use either a mouse or the cursor keys to select the program you wish to install. With a mouse, click on the bullet next to the appropriate program. With cursor keys, move the pointer to the bullet and press Enter.

5 Taking Magic Pockets as an example, you should now see an on-screen message saying

The program will be decompiled to C:\POCKETS. Is this OK? (Y/N)

6 If this is OK, ie, you want to install Magic Pockets Soccer to your hard disk C:, and you have no other directories called POCKETS, press Y and then Enter.

7 If you are installing to another disk, or you wish to give the directory a different name, simply press N [Enter], backspace over C:\POCKETS and retype your preferred destination, eg,

B:\MAGIC [Enter]

8 The program should automatically install, finishing with the words All done!

9 To play the cover programs, log on to the correct drive and

WILF II

This, the second game to feature the lovable Wilf, has been written by Graham Cluley, author of such shareware masterpieces as Jacaranda Jim and Humbug.

Can you guide wibbling Wilf around the maze madness? For reasons far too implausible to go into here, Wilf has found himself in a spot of bother.

His only hope of survival is to fill in the mazes flung at him by the evil jelly-like Glumphs. Wilf fills in the mazes with jam. Boy, does this make the Glumphs angry!!

So angry in fact that occasionally the Glumphs unleash their deadly weapon. Codenamed 'Frank' the Glumphs' secret weapon is cunningly disguised as a boiled sweet. But do not be fooled by this, it will do its level best to eat up your jam.

Frank is indestructible, but the Glumphs can be zapped by firing pom-poms at them. Watch out though, because they reappear shortly afterwards!

The more mazes you manage to fill in with jam, the quicker the game becomes. Every now and then extra lives and extra pom-poms appear, so get them if you can!

This program features amazing digitised sound effects, which you can hear if you have a Sound Blaster or compatible card.

When a cursor key is pressed Wilf continues moving in his current direc-

tion until motion in the specified direction is possible, or until he hits a maze wall, in which case he stops. Only one keystroke is remembered; the last key pressed indicates the desired direction of motion.

A tip is that you should try to think ahead at all times. For example, if you want Wilf to take the next left turn, press the left arrow key at once. This will be remembered; if you wait too long, Wilf may move past the turn you meant to take, and you will need to turn Wilf around. Do not hold down any cursor key; just tap it, and be careful not to press two keys at a time.

Bonus mazes

Players can now load in libraries of Wilf mazes (distinguishable by their WLF file extension) into the main Wilf game. A bonus set of mazes (suitably titled BONUS.WLF) is supplied with this game.



CONTROLS

Up	Up Arrow
Left	Left Arrow
Down	Down Arrow
Right	Right Arrow
Space	Fire a pom-pom in current direction.
S	To toggle sound between music, sound effects, and silence
P	Pause game. Press P again to continue.



TROUBLE-SHOOTING

I get the message 'Cannot run in Mono'.

- The menu program will not run on mono machines. If there are mono compatible programs on the disk, you will have to install them manually by copying the disk files to your hard disk and using Pkunzip to decompress the .ZIP files. The syntax is Pkunzip [filename] [Enter].

When I try to start the menu program I get no response or the message 'Bad Command'.

- Have you made the drive containing the cover disk the current one?
- Is the disk properly inserted with the drive door closed?

I have correctly installed the program, but it won't work.

- Have you followed the correct loading procedure?
- Have you made the correct directory and drive the current one?
- If the game was installed to floppy, is the correct disk properly inserted and the drive door closed?

The program I have selected won't install properly.

- Is there a blank, formatted disk in the drive you have selected, and is the drive door closed?
- Is there enough room on the disk you have selected. You should only install programs to blank disks (one for each program you install). If installing to a hard drive, as a general rule, you should have at least two megabytes of free space for each month's cover disk. Sometimes the programs will not fit on to a 360K disk, even if it is completely blank.

HELPLINE

If you still have problems then please phone our helpline number below:

**DISK HELPLINE:
(0443) 693233**

The helpline operates between 10.30 am and 12.30 pm weekdays. If possible, please have your computer operating and your cover disk ready when you phone the helpline. If your phone is not near the computer then please note down as much information about the fault as you can and have pen and paper handy before you call.

DYNAMO

Just to really get you into the spirit of 1992 we've included this program by PC Solutions that plays a very strong game of the European version of draughts.

The aim of this program is to introduce the continental version of draughts to the UK, and hopefully get people interested in this game. Draughts has always suffered in comparison with chess. This is a great shame, as both the English 8 by 8 and the continental 10 by 10 versions are very subtle and complex games. Indeed the 10 by 10 game arguably offers more permutations than chess, and is very highly regarded in Europe. This version is limited to 10 seconds maximum move time, but you will need to be a good player to beat it!

Note how powerful the sweeping kings are in the continental game; the side that gets an early king usually has a decisive advantage. One rule that throws beginners is the one that stipulates that you must jump the maximum number of opponents, when given a choice. This is necessary to enable the winning side to force some of the endgames; you will get the idea when you are on the receiving end of the computer's shots!

Playing the game

European draughts is traditionally played on the black squares of a 10 by 10 board. Dynamo can re-size the board, but for clarity I'll discuss the 10 by 10 game. The squares are numbered from 1 (top left) to 50 (bottom right), with black men on squares 1 to 20 and white on squares 31 to 50. Men can move diagonally forward one step on to empty squares, or jump over and capture an adjacent opponent's piece in any direction, if there's a clear space immediately behind it. Note that men can leap backwards, unlike the English game. One very important rule: if you can jump, you must! If, after jumping, the same piece can make further leaps, it must do so. Furthermore, if you have an option of more than one series of jumps, you must take the option that captures the maximum number of pieces!

When a man reaches the top row of the board, it becomes a king. In European draughts, kings can sweep any distance along a diagonal, rather like bishops in chess. Furthermore they can leap an opponent, land on any space beyond, and then make further leaps, in a different direction

if necessary. You are still forced to make moves that jump the maximum number of opponents!

One final rule: a man is not crowned until the end of a multi-jump sequence. That is, a man can leap into and then backwards out of the king row without being crowned. It is only crowned if it finally comes to rest on the king row.

Well, those are the rules. Confused? This sort of thing is easier to see than describe, so play some experimental games, or set auto-play on and watch the computer play itself!

When playing, move your cursor by using the numbers around the '5' on the numeric keypad and hit ENTER to select a piece. If that piece can move in more than one direction, you will then need to select a direction key (1,3,7,9). That is, 7 moves up-left. King moves may require you to select a destination and hit return. If you have a mouse you can simply click the left button on source and destination squares. To abort the computer's thinking, hit the Esc key once (you may have to wait a bit before the cursor appears).

Added bonus

As an bonus extra, and to placate lovers of the traditional English game of draughts, we've included a text file which explains how to win at draughts.

You can read this text file on the screen by typing:

TYPE MOVEOVER.DOC | MORE

and pressing a key to bring each page up on screen. Alternatively, you can make a hard copy of the file by setting up your printer, and typing:

COPY MOVEOVER.DOC PRN

which will print the entire document for you

CONTROLS

ESC	Abort game and return to main menu.
-,+	Alter average response time in seconds. (Zero for easy mode)
F1	Show moves, that is, all of your movable pieces.
F2	Make me take your go.
F3	Auto-play. (Hit Esc to end)
F5	Make a move without computer response (for two-player game or position setup)
F6	Invert board, so that black is at the bottom.

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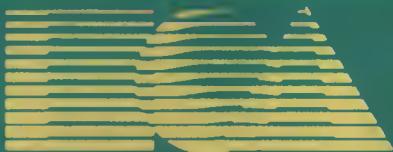
Reviewed back in Issue 7 and receiving a more than healthy eight stars, the Disney Animation Studio enables you to create colourful mini-masterpieces with full musical and audio accompaniments or edit the existing demo cartoons. The program will also introduce you to the principles of Disney's own animation techniques, and if you have a Sound Blaster, Tandy Sound or Disney Sound Source, you can add music and effects to your finished cartoons. The only drawback to this otherwise painless animation package is that a single copy will set you back one penny short of a hundred pounds. Luckily we've got three copies to give away.



BEAUTY

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Battle Chess 3.5"/5.25" - CGA, EGA, VGA, Windows

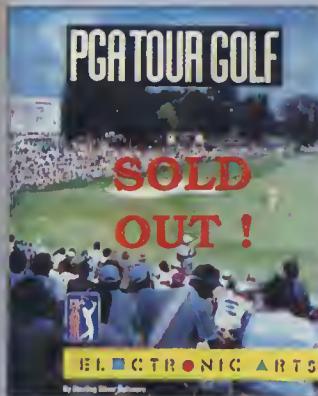
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POPULOUS

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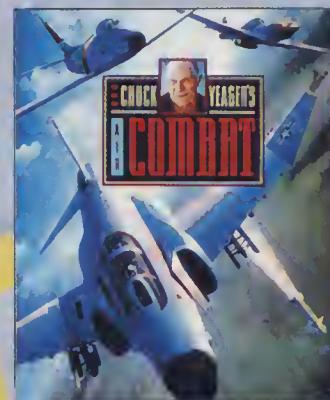
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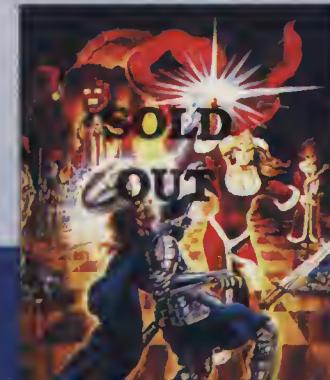
Prove your own racing prowess as you work your way up through 6 professional racing circuits. Players face all the heart-stopping race car



challenges in this brilliant professional racing simulation.

BATTLE CHESS

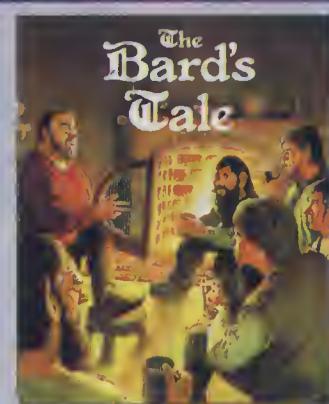
Battle Chess brings chess to life by combining a



magnificent chess logic system with colourful and dramatic 3D animations and digitised sounds. Winner of the Software Publishers Association award for best graphics.

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			17	18	19	20
21 Longest day of the year Fathers' Day	22	23	24 Midsummer Day	25	26	27
28	29	30				

JULY 1992

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			1	2	3	4
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19	20	21	22	23	24	25
26	27	28	29	30	31	

JULY 18TH

PC REVIEW ISSUE 10 GOES ON SALE

Turn on the music

From sampling to symphonies, and MIDI to Mantovani, next month sees the start of a series on the PC and music. We'll be explaining, in plain English, how to compose and edit music using the PC and popular music software.

If you've ever wanted to exercise your musical talents with the PC, but have been put off by jargon and the sheer amount of kit that appears to be needed, read PC Review's music series to find out why it needn't be so difficult after all.

**Joysticks and game cards**

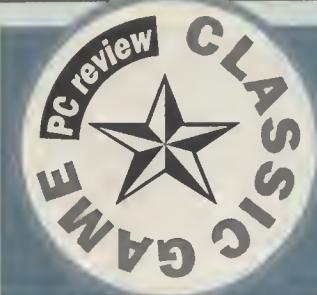
The First Steps series shows you how to fit a game card to your PC and use a joystick, with a look at some of the huge variety of joystick-style game controllers on the market today.

Plus...

Wizardry VI — Bane of the Cosmic Forge: read the review to find out why this series has been snapped up by US Gold for official UK distribution ... the promised Harrier preview makes its appearance in Coming Soon ... and Sid Meier talks about life, the universe, and Civilization.

Place an order with your newsagent now.

CLASSIC GAME GUIDE



Classic action, classic thrills, classic games – brought to you exclusively in PC Review's new Classic Games Guide! Over the past few years there has been a massive increase in the number of software houses developing games for the PC in this country *and* the amount of products coming from the United States. The choice facing the lucky buyer is truly

impressive!

Each month we will feature top quality PC games, covering all aspects of computer entertainment, from action to brain teasers, fantasy to sport, and flight simulations to strategy. Quite simply the very best your money can buy. And each month we will also take an in-depth look at a particular classic game.

This section of the magazine is not just a nostalgia trip, however. Classic games are being created all the time and they too will find a place here. So if you are a keen gamer or newcomer to the excitement of computer entertainment, there will always be something new for you to read each month. We are sure our Classic Games Guide will become an essential companion.

This guide is about buying games as well. If you see a game you like the look of, you will probably want to buy it. But where? How can you be sure it will be in stock? Don't worry. Take special note of PC Review's up-dated Dealer Directory.

The Dealer Directory lists nearly 40 of the country's top independent computer shops and, in conjunction with Centresoft, one of the UK's leading distributors of software, they have agreed to feature the games listed in this guide.

When you visit, look out for the PC Review Recommended logo – the guarantee of quality games and quality service.

The action starts now ...

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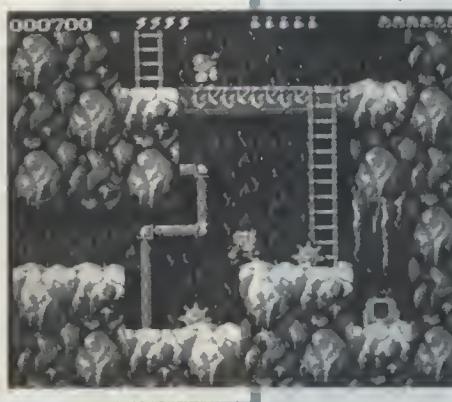
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CLASSIC GAME OF THE MONTH

RICK DANGEROUS 2

from Kixx



We have done everything humanly possible to check the information in this guide. But prices do change, distribution switches from one company to

another, even brand names can alter. While we will update the information regularly to take account of this, we cannot be held responsible for errors.

Anyone – suppliers, publishers or readers – who knows of any products suitable for inclusion, but which have been mysteriously omitted, can write in

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CLASSIC GAME OF THE MONTH

Rick Dangerous 2

Over the years, sequels have earned themselves something of a bad name, and usually deservedly so, as they rarely manage to capture the spirit or excitement of the original, or worse still, they resemble the original so closely that the only thing which has changed is the addition of a '2' to the title.

Not so in this case though, as MicroProse's continuing adventure of the appropriately named Rick Dangerous ranks with the likes of The Secret Of Monkey Island 2 as being a true progression from an already exceptional original.

The diminutive adventurer, who found himself dressed in true Indiana Jones style for his first affair (in which he took on the might of the entire Gooloo tribe and their Nazi chums) has now traded in his 40's style garb to don the identity of another matinee adventure hero, Flash Gordon.

The plot thickens, as our hero returns to London to find Hyde Park has been overrun by alien space craft. Could this be the work of the infamous Fat Man, Rick's arch enemy? Of course it could ...

Rick Dangerous 2 is arcade adventuring in its truest possible sense. There's just as much importance attached to working out how to get our hero through some of the trickiest situations he faces as there is to joystick dexterity and fire-button speed.

However lessons have obviously been learned from the original. For example, where Rick as Indy Jones could walk, run, jump, poke things with a pointed stick, fire his revolver and plant sticks of dynamite, Rick as Flash Gordon has now developed the ability to punch and kick his opponents for good measure (although somewhere along the line he's lost the pointed stick and traded in the six-shooter and dynamite for a ray gun and sliding space mines).

Other than that the object has remained the same: to work the mighty midget's way up and across (and sometimes even back down again) to the end of each multi-screened level, giving the imperialistic aliens the seeing to they deserve and avoiding the many pitfalls and zap traps along the way.

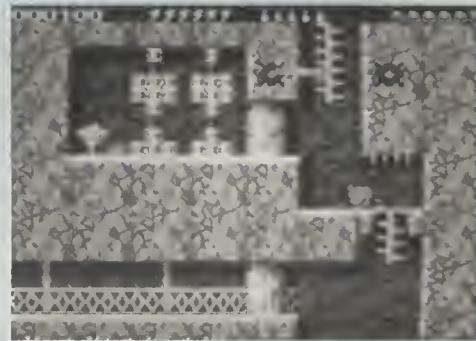
What this actually amounts to is five levels of puzzling action, each one harder than the last (unless you discover the cheat mode and tackle them backwards of course!), but styled with true progression, so that lessons learned on level one will undoubtedly come in handy later on.

Better still, for once those of you who haven't got the latest hardware with the numbered chips and fastest clock speed can simply ignore all of that mullarkey for a change as RD2 is cunningly crafted to run equally well on even the humblest of specs. In fact, you don't even need a joystick or mouse, as every function is accessible from the keyboard, and as for VGA graphic ... pah! This is one game where the four colours of CGA are not so much a restriction as a nostalgic and appealing aspect of the game.

Sadly, the chaps behind this micro classic have gone on to greater things since applying its finishing touches in 1990 (Core Design started life purely as a third party developer for other publishers, but has since made a name as a publisher in its own right with such games as Corporation and Thunderhawk), so there's little or no chance of another sequel ever taxing your brain and twisting your fingers.

But that shouldn't bother you for quite a few weeks yet, because if you're still reading this then you obviously haven't started playing yet. What are you waiting for? There's a Dangerous world out there just waiting to be conquered.

Rick Dangerous 2
Kixx **£9.99**



ACTION

GOLDEN AXE

Virgin, £29.99

An unusually successful conversion (in PC terms) of a traditional hack and slash coin-op - Golden Axe offers a choice of male and female heroes, but it's still all just straightforward macho bloodletting really.

PRINCE OF PERSIA

Mirror Image, £9.99

The amazing animated characters are only eclipsed by the depth of the play. An extremely durable game, number four in our Readers' Top 50, and a genuine contender for the greatest action game ever.

IVAN IRON MAN STEWART'S SUPER OFF-ROAD RACER

Virgin, £29.99

It's high-speed, four-wheel-driven action all the way in yet another successful Virgin coin-op conversion. More multi-player fun than you can shake a gearstick at.

SPEEDBALL

Mirror Image, £9.99

Hectic and brutal futuristic sporting action from the Bitmap Brothers, with pinball, basketball and martial arts rolled into one great sucker punch. Only surpassed by ...

MUDS

Rainbow Arts, £24.99

A peculiar 'future sport', where two teams of astonishingly ugly monsters try to throw an SFA (Small Furry Animal) into a basket. A strong blend of sick humour, action and strategy. Highly entertaining in a strange sort of way.

VIRUS

Mirror Image, £9.99

A still-stunning 3D shoot 'em up (despite its advancing years), which rewards the time spent in mastering the controls with exhilarating and satisfying action.

RICK DANGEROUS 2

Kixx, £9.99

As is this laugh-a-minute sequel, where the pint-sized hero once again has to negotiate his way through level after level of less than serious opposition. Pure

platform-based arcade adventure over four levels packed with complex and testing puzzles. A hilarious masterpiece.

SPEEDBALL 2

Image Works, £30.99

You guessed it! A worthy sequel to the impressive original, featuring a larger play area, new rules, harder and faster action and a whole new management structure. The updated pitch allows for more violent plays. It appeals to sports fans as well as play tacticians.

XENON 2

Mirror Image, £9.99

Still the ultimate in straightforward shoot 'em ups, (above) featuring almost unlimited ship upgrades and a real difficulty curve. The Bitmaps' signature metallic graphics are used to particularly good effect.

INTERPHASE

Mirror Image, £9.99

A graphically impressive 'cyberpunk' 3D action adventure set inside a 'Big Brother' computer. Unusual and playable in equal parts.



SIMULATION (FLIGHT)

CHUCK YEAGER'S AIR COMBAT

Electronic Arts, £34.99

Electronic Arts makes a real bid for MicroProse's 'king of the sim' title with this multi-plane flight and fight extravaganza, played out above three wars and scenarios and named after the first man to fly faster than the speed of sound.

F-29 RETALIATOR

Ocean, £34.99

An impressive, if slightly simplistic, simulation debut from the movie tie-in specialist. Good speed, multiple missions and a choice of two experimental craft make this a good choice for those who value instant action over accuracy.

It also includes an option to play head-to-head with

another human player via a modem. With the possible exception of Jetfighter, this has the easiest controls on any flight simulator. It's pure fun from the moment you take off.

F117A STEALTH FIGHTER

MicroProse, £39.99

Nothing less than the state of the art in both subject matter and programming technology, F117A features multiple radar-invisible missions over five theatres of war. Seeing is believing - an absolute must for serious flight fans. Apparently this simulation caused quite a stir in military circ when it came out because of its accuracy. There are plenty of theatres of war in which to fly the craft, including Central Europe, the Middle East, Libya, Korea and

Northern Cape, which vary in complexity and difficulty.

FALCON 3.0

Spectrum HoloByte, £49.99

Reviewed in PC Review Issue 4, Falcon 3.0 offers a strong action-based complement to MicroProse's F117A (see above). Beautifully presented, this simulation features head-to-head combat at the controls of the USAF's pride and joy, the F-16 Fighting Falcon. As good as they come.

Rated 9

GUNSHIP 2000

MicroProse, £39.99

A nice break from the usual fixed-wing action, Gunship 2000 is a strong progression from MicroProse's original (and highly popular) chopper simulation, with a strong

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SIMULATION (FLIGHT)

storyline built in. Highly recommended.

FLIGHT SIMULATOR v4.0

Microsoft, £44.95

An all-out 'simulator' as opposed to a 'simulation', version four offers precious little combat, but does offer the most realistic recreation of real flight that's possible to get from any home computer. The big Daddy of PC flight sims and a real learning experience.

KNIGHTS OF THE SKY

MicroProse, £40.86

Chocks away for a historical joyride over the trenches of World War I in France. What it inevitably lacks in speed, Knights of the Sky makes up for with tense and gripping dogfight action. A nice break from the usual array of F-birds.

LHX ATTACK CHOPPER

Electronic Arts, £39.99

Although it's now been superseded by MicroProse's Gunship 2000, LHX Attack Chopper still offers a mix of strong action, unusual gameplay (with unusual experimental aircraft) and a structure which works well enough for experts and amateurs alike. Control is simple yet comprehensive. It contains a wealth of gameplay options and three scenarios – set in Libya, Vietnam and Europe.

MiG-29 SUPER FULCRUM

Domark, £40.85

The sudden and unexpected end to the cold war allowed Western developers, game designers and programmers to check out and recreate a number of Soviet aircraft, the best result of which was this game, reviewed in Issue 2. In keeping with these changes, the aim of this game is to maintain the new world order. As a member of a UN peace-keeping force you are sent to free an unnamed area of South America which has come under rebel domination. Your goal is to knock out their headquarters. No easy task as the rebels themselves possess an impressive array of weaponry. Aircraft buffs will

undoubtedly enjoy flying this less technology-heavy plane. **Rated 7**

RED BARON

Dynamix, £39.99

It really needs a powerful PC to operate to its optimum ability, but once this is taken care of this is one of the most accurate and option-heavy simulations available. The most highly rated flight sim in our Readers' Top 50.

JETFIGHTER II

Velocity, £39.99

Concentrating on easily-accessible 'arcade-style' action rather than 'true' simulation, Jetfighter II offers four aircraft, multiple enemies and 100 missions. Neat, polished, accessible and lavishly presented.

SECRET WEAPONS OF THE LUFTWAFFE

Lucasfilm, £40.99

Lucasfilm is a company which specialises in producing top-notch games in two distinct areas: animated graphic adventures (The Secret Of Monkey Island etc.) and historical flight sims, the best of which is this beauty, first reviewed in Issue 1. The premise of the game is what if the jet and rocket-powered weapons the Germans were working on in the dying days of the war came into general use and their effect on the outcome of the war. Extra missions disks are now available. **Rated 6**



SIMULATION (DRIVING)

4D SPORTS DRIVING

Mindscape, £30.99

A hybrid of Domark's Hard Drivin' and Accolade's Test Drive games (more later), DSI's 3D racer is a one-on-one against an equally well equipped opponent. Comes complete with a course designer.

BILL ELLIOT'S NASCAR CHALLENGE

Mirrorsoft, £35.99

The trouble with North American Sports Car racing is that it all takes place on a circular course, which limits the game's variety. That aside, this is a good rendition of one of the fastest four-wheel

activities there is. The game includes a host of options. You can choose cars, tracks, type of race – qualifying, apprentice or main event.

CRASH COURSE

Mirrorsoft, £30.64

One of many 'clones' of Tengen's superb Hard Drivin' coin-op (the arcade world's most realistic driving simulator), this one features five courses plus your own track editor.

INDIANAPOLIS 500

Electronic Arts, £24.99

Among the greatest simulations of any type available for the PC. You race against 32 other drivers in your bid for glory as the simulation

takes you from initial practice, warm-up laps, qualifying heats and the big race itself.

Gasp in amazement at the realism ... then do it all again using one of the spectacular replay options. Unsurpassed.

HARD DRIVIN' 2 - DRIVE HARDER

Domark, £30.64

Not so much a sequel, as a second attempt at converting a difficult coin-op – and good thing too as this is far better than the original. A real challenge.

MARIO ANDRETTI'S RACING CHALLENGE

Electronic Arts, £24.99

Putting you at the wheel of everything from an F1

TEAM SUZUKI**Gremlin, £29.99**

Reviewed in Issue 1, Team Suzuki is almost like a flight simulator on the ground – and just as difficult to get to grips with! You get the chance to ride three classes of mototbikes, a 125cc with six speed automatic gearbox, and 250cc and 500 cc bikes both with six speed manual gearboxes. The game features a TV camera option so you can see yourself race. Team Suzuki is difficult to master but well worth the trouble – especially for bike fans.

Rated 7

**SIMULATION (OTHER)****SILENT SERVICE 2****MicroProse, £35.75**

Historically and technically accurate (right down to the profusion of unreliable torpedoes), SS2 takes quite a bit of mastering but it's worth every minute. Some of the combat may seem over simple but they do provide an engrossing tactical experience of being an American World War Two commander in the Pacific Ocean. It's got atmosphere in depth.

DAS BOOT**Three-Sixty, £35.99**

An unusually coherent and playable mix of action and strategy, this U-boat sim may not be as comprehensive as Silent Service 2, but it's a sight more accessible. The set-up screen consists of choosing the difficulty levels, type of submarine and how realistic you want the simulation to be. There are no huge manuals to

read and you can get straight down to the action with training missions. These allow you to quickly get to grips with your submarine and get some quick battle experience. Most combat elements are included such as torpedo runs and anti-aircraft gunnery

TEAM YANKEE**Empire, £35.75**

Based on Harold Coyle's novel, this is a similar game to MicroProse's M1 Tank Platoon, and a little more complex strategically. This is mainly down to having to control four platoons simultaneously. Team Yankee is also distinguished by the use of bitmapped graphics for the 3D rather than filled polygons. This helps to give the game a more absorbing atmosphere than many other simulations. Watch out for its sequel, Pacific Islands, which is coming soon.

M1 TANK PLATOON**MicroProse, £40.86**

A good tank simulation, made better by the fact that (as the name suggests), you take charge of a whole group of the metal beasts. There is a choice of engagements ranging between easy and hard, with optional enemy capabilities, from second line troops to the very best. Well structured and engrossing.

RAILROAD TYCOON**MicroProse, £35.75**

A completely unique game – and not just for trainspotters or overgrown kids either. Take control of a fledgling railway in the heyday of steam and use your best business acumen to take it across an entire continent – wiping out, or buying up, the opposition on the way. This forerunner of the superb strategy game Civilization is definitely not to be missed.

STRATEGY WAR**COMMAND HQ****Microplay, £34.99**

Similar in some ways to the popular board game Diplomacy, Command HQ puts the player in charge of everything the West's got in any one of three historical situations and one futuristic scenario set in 2023. The scenarios increase in complexity as the date progresses. For instance, you can start out with infantry, cruisers and subs in the early scenarios and end up with nuclear weapons, satellites and other high tech equipment in

the later ones. Economics also plays a key role in the success of your war campaigns.

SUPREMACY
Virgin, £34.99

Two huge civilisations battle it out for a single star system. Attack planets and then exploit them for resources vital to the war effort. Slick graphics and a more than user-friendly interface turn what's essentially a political power struggle into a hugely enjoyable mental workout – a most rewarding evening's entertainment.

HARPOON CHALLENGER PACK**Three-Sixty, £49.99**

A good value package which comprises the highly-acclaimed naval simulator, plus its North Atlantic Convoy BattleSet – a must for serious naval strategists.

UMS II**Rainbird, £40.86**

Make your own wargames with this extraordinarily complex but powerful wargame generator. A program for anyone who feels serious about strategy gaming.

thunderbolt to a dirt-track buggy, MARC is as much fun as it is well executed. Only for users with faster processors though.

TEST DRIVE III - THE PASSION**Accolade, £30.64**

The 'passion' in the title presumably refers to the way that owners feel about the luxury cars featured here including a top of the range Lamborghini. Apart from that, it's a standard 3D driving sim with a few nice bells and whistles thrown in for good measure.

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FANTASY RPG

BUCK ROGERS

SSI, £34.99

An unusual, highly successful, computer appearance for one of the cinema's early heroes. A conversion of a TSR board game, this has all the usual SSI hallmarks: strong presentation, atmosphere and depth. It uses a variant of the AD&D computer games control system.

BARD'S TALE 2

Star Performers, £9.99

The second – and arguably the most enjoyable – of the Bard's Tale series is one of the best of the 'old-style' (non-arcade) RPGs. Soon to be bundled with the other two in the series.

CORPORATION

Core Design, £34.99

Very much in the '3D arcade' vein, Corporation achieves something which most computer games can only dream of – it creates and maintains a wholly realistic environment. It's a futuristic space opera in the confines of an overrun conglomerate. You must lead an elite team, equipped with stunning high-tech gear, enter the building and find out what is going on.

ELVIRA, MISTRESS OF THE DARK

Accolade, £40.86

Although it's not exactly the type of game that you might expect from America's up-front queen of the B-movie (in other words, it's a tenuous licence

tie-in), Elvira remains an impressive (if slightly shallow) adventure, nonetheless.

TUNNELS & TROLLS

New World, £30.99

Once again based on a popular board-based RPG, T&T doesn't have a lot to offer in the presentation department, but makes up ground with a well structured plot. Combat can be automatic or manual and can even be humorous – such as pushing enemies away. Perhaps a little dated.

WASTELAND

Electronic Arts, £24.99

Not notable for its up-to-date interface, Wasteland is

however worth checking out for its unusual scenario – a post-holocaust nightmare replaces the usual dungeon-based stuff.

MARTIAN DREAMS

Origin, £36.99

Origin's second adventure outside of the acclaimed Ultima stable is an historic sci-fi jaunt in the style of H.G. Wells. Flawed, but enjoyable.

THE SAVAGE EMPIRE

Origin, £35.99

The one that came before Martian Dreams, Savage Empire borrows from the plot of The Land That Time Forgot. It might not satisfy Ultima veterans, but who cares?

EYE OF THE BEHOLDER

SSI, £30.99

Conceived and executed in the style of the classic Dungeon Master, Eye of The Beholder is exciting and challenging in equal measure. It's one of the highly-successful Advanced Dungeons and Dragons games based on the TSR role-playing tabletop game. First you must choose your party of adventurers, their race (human, dwarf, elf etc) attributes (strength, intelligence) and a whole host of other details. The adventurer's view is of a 3D dungeon and all the controls are mouse-driven. SSI has managed to maintain the feel and atmosphere of the original game while making the AD&D experience available to a lot more people.



BRAIN TEASERS

LOGICAL

Rainbow Arts, £19.99

Nicely paced and colourful arcade-based teaser which may just fail to provide any long-term interest.

E.MOTION

US Gold, £25.99

An infuriatingly compulsive arcade teaser that's as hard to describe as it is to put down. It involves matching coloured balls together causing them to disintegrate. When they have all gone you move to another level – of which there are 50. Only approach it if you've got a lot of time on your hands. It was – and still is – an wholly original game.

SARAKON

Virgin, £19.99

Similar to Shanghai, and also based on Mah Jongg, Sarakon stands head and shoulders above most of its contemporaries – in terms of difficulty at least. A 16x16 squared grid forms the basis, square tablets each with a variety of symbols are placed randomly on the grid.

The idea – as with many card games – is to combine and discard pairs of tablets until the grid is cleared. However, tactical play adds complexity. The first level of play is called 'Stupid' and that's how you'll feel when you fail to complete it. Not for the faint of heart.

THE SENTINEL

Firebird

No Longer Available

Worth scouring the bargain bins for, Geoff Crammond's masterpiece is a rare breed – a strategy game comparable to chess which can only exist inside a computer. Easily the most atmospheric game of all time.

SPOT

Virgin, £24.99

Easily confused with the board game Othello, this is actually an original game of its own – and a rather good one too. The original game is now quite old, but was recently revamped and relaunched.

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West Point Creative have now released a complete Multimedia upgrade kit for the PC. Comprising of the stunning SoundBlaster Pro card, a high performance internal CD ROM drive, MS Windows + Multimedia extensions and a host of bundled software. The CD ROM has a 64K cache buffer and 150K per second data transfer rate. Also available is a further upgrade which includes a MIDI Kit, SB Pro sequencer and the disks - Creative Sounds, Microsoft Bookshelf, Select Ware Systems demos, and 'Jones in the Fast Lane' game. Complies with the Multimedia PC standards, giving full multimedia compatibility.



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BRAIN TEASERS

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Computer chess is computer chess – right? Well, yes ... but this one (reviewed in Issue 4) takes the pride of place through its presentation and user friendliness.

Rated 9

VAXINE

US Gold, £25.99

A sort of follow-up to E.Motion, this adds an extra dimension – well, in graphic terms at least. You roam as an abstract representation of the body shooting rogue virus cells. The action ranges over 99 levels with faster and meaner germs being introduced all the time. A new age pastime for the modern puzzle addict.

WELLTRIS

Infogrames, £39.94

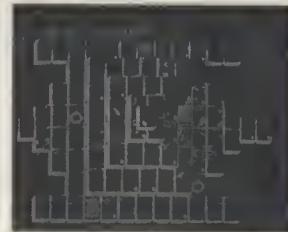
From the same former Soviet scientists who brought you Tetris comes this 3D variation on the original theme. The object is to manipulate falling shapes. The 3D aspects means the pieces appear to fall from above. It's good enough but how can you improve on perfection?

SHANGHAI II

Activision, £30.99

A test of memory and skill using the Mah Jongg card set, this is now available in numerous PD incarnations, although none as polished as this 'official' version (reviewed in Issue 1).

Rated 7



PIPEMANIA

Empire, £25.53

Second only to the great Tetris as an invisible hour eater, this tale of twisting pipes and water will provide a challenge to even the hardest gamer.

KLAX

Respray, £7.99

An unusual block-based game which uses colour coding rather than shapes to generate its puzzles. Not as addictive as Tetris, but a nice short-term diversion.

LOOPZ

Audiogenic, £25.99

Unusually compulsive puzzler which adds a new twist to the art of shape manipulation. Hard to find, but worth keeping an eye out for.

NIGHT SHIFT

Lucasfilm, £30.99

More of an arcade game than a pure puzzler, this does however have enough teasers incorporated to keep most gamers happy. Nicely humorous too.

TETRIS

Infogrames, £24.99

The greatest puzzle/dexterity game of all time. This Soviet sensation involves moving different shaped blocks to fit them together. Everytime a horizontal line is completed it disappears. The more lines completed, the more points you collect. Watch out for the original Mirrosoft version, which is still the best around. A classic timeless game.

SPORT

4D SPORTS BOXING

Mindscape, £30.99

They don't look very much like boxers, but the strange polygon-based pugilists featured here certainly move like them. The game features

multi-views of the fights and also allows you to train and develop your fighters.

Control of the fighters is also comprehensive, allowing you to walk towards an opponent, back off, circle left and right

and punch. The game is most fun if played in company.

BUDOKAN

Star Performers, £10.99

Pretentious in tone it may be, but Electronic Arts' multiple event martial arts challenge is still the best game of its type available. Players train in four forms of combat: karate, kendo, nunchaku and the bo staff. During fights you must keep an eye on stamina and ki levels as these determine your state of health and the power of your blows. Excellent sound and graphics and an unusual level of depth and excitement for this type of game.

HARDBALL 2

Accolade, £25.53

The definitive rendition of America's favourite sport available for your computer.

LINKS

Access, £40.99

A graphically impressive and

TV SPORTS BASKETBALL

Cinemaware, £30.64

Unlike most previous attempts at producing a realistic computer basketball simulation, this game doesn't try to fit in the whole court at once – and is greatly enhanced because of this. Essentially you control one on-screen player at a time, the rest of the players behave according to chosen tactics. Action ranges from pure arcade friendly game to hard-fought league matches. Competitive and playable.



option-filled variation on the age-old theme of computer golf. Be warned though, it's only for those of you with powerful machines.

PGA TOUR GOLF

Electronic Arts, £25.99

Overall, this has to be the best golf game currently available on any computer. It may not have Links' looks or options, but it makes up for this in terms of sheer playability.

POWERBOAT USA

Accolade, £30.99

A deceptively playable simulation of a sport which most of us would never even think about taking part in. Ignore the poor presentation - this could become a favourite.

PRO TENNIS TOUR 2

Ubi Soft, £29.99

Multiple options are available, it looks good, it plays well - what more could you want? Choices include singles and doubles matches and type of court surface. There's even an option to play two on one. Reviewed in Issue 2, this is a definite ace.

Rated 8

SKI OR DIE

Electronic Arts, £25.99

A multi-event affair which takes a lighthearted view of Fergie's favourite winter pastime. There are five sub-games: snowball blast, downhill blitz, acro aerials, snowboard halfpipe and the

intertube thrash. Points are scored for being the fastest or being able to leap the furthest. The presentation and execution are impeccable. Easy to get into and most enjoyable to boot - check it out.

TV SPORTS FOOTBALL

Mirror Image, £9.99

This is, of course, American football rather than soccer. It combines strategy plays with fast arcade action.

No longer the state of the art in terms of programming, but still a comprehensive and enjoyable rendition of the sport. Made more accessible than most by the usual cinemaware TV presentation.

ADVENTURE

HEART OF CHINA

Dynamix, £39.99

Another attempt at producing an interactive movie, Heart of China is notable for its arcade subsections and - more importantly - its beautiful digitised graphics.

Set in the 1920s in Hong Kong, the basic plot involves the rescue of a nurse who has been kidnapped by a ruthless tyrant. The point and click game control interface works smooth, removing the need for any typing. This evocative action adventure is a must for VGA users.

LEISURE SUIT LARRY V

Sierra, £39.99

The other side of Sierra (contrasting nicely with the 'family' style of King's Quest, etc.) is best depicted by Al Lowe's luckless lover boy, who this time around goes in search of the missing disks of Leisure Suit Larry IV.

Here Larry must interview women to find a hostess for a sleazy TV show. But to Larry's cost, the Mafia becomes involved. More cheeky chuckles for fans of the series.

SORCERERS GET ALL THE GIRLS

Legend, £30.64

Not as saucy as the title suggests, this is nevertheless an engrossing and perplexing adventure from the old school. It's really just a text adventure, but a complex, entertaining and satisfying one nonetheless.

MAGNETIC SCROLLS COLLECTION 1

Virgin, £34.99

Reviewed in Issue 1, this three game package updates some of the adventure specialist's best-loved works using the all-new 'Windows' system (as seen in Wonderland). The games included are Corruption, Fish! and Guild of Thieves. Good value.

Rated 7

THE SECRET OF MONKEY ISLAND 2

Lucasfilm, £39.99

detailed graphics and a superb control system all combine to produce an enjoyable experience.

THE SECRET OF MONKEY ISLAND 2

Lucasfilm, £39.99

More buccaneering brilliance with a smile on its face, as the original's hero, Guybrush Threepwood, once again takes on the evil ghost pirate LeChuck. This game demonstrates just how many brain-teasers can be constructed within the limitations of an icon-based control system.

Outstanding VGA graphics with impressive lighting and shading add to the piratical atmosphere. It's also packed with jokes. Reviewed in issue 3, this is a perfect progression from the original.

Rated 9

SPACE QUEST IV

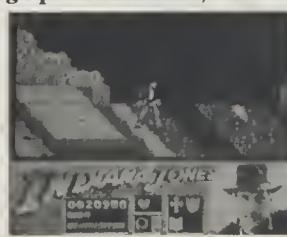
Sierra, £34.99

In yet another ongoing saga, Sierra's comical space hero,

INDIANA JONES AND THE LAST CRUSADE

Lucasfilm, £30.99

One of the great animated graphic adventures, with plenty of atmosphere, and humour, which has only really been surpassed by Lucasfilm's subsequent efforts (now available in a double pack with *Zak McKracken And The Alien Mindbenders*).



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ADVENTURE

Roger Wilco, once again boldly goes on a mission that's about as much to do with time travel as space exploration and never takes itself too seriously. Sierra fans will know exactly what to expect – the unexpected!

And that means he has somehow landed slap bang in the scenario for Space Quest XII: Vohaul's Revenge and becomes involved with the Sequel Police who believe Roger's adventures have gone on far too long. Easy point and click interface control, odd-ball puzzles and digitised artwork.

BATTLETECH 2

Infocom, £39.99

Based on a highly popular futuristic combat board game, Infocom's Battletech showed in no uncertain terms that there was potentially more to that late, great company than text adventures.

Here huge mechanised monsters – Mechs – stride the land battling out with huge and powerful weapons. But this isn't just a shoot 'em up. There is a large degree of strategy involved. Reviewed in issue 3. Rated 5

3D CONSTRUCTION KIT

Domark, £44.99

Build your own 3D worlds with this unusually powerful game creator from the team that brought you Total Eclipse and Driller. As well as constructing the geometric scenery, you can also add your own borders and music, and set up animated effects.

CASTLES

Electronic Arts, £34.99

Probably the only computer game ever to be set in Wales, Castles sees the player design, build and then defend a castle. One for the long-term strategist.

BATTLE CHESS II

Electronic Arts, £24.99

A follow-on from EA's original animated chess game, this brings the pieces to life in the same humorous way as its predecessor, while introducing the more unusual rules of Chinese Chess to a Western audience.

SPELLCASTING

Legend, £39.99

Like Sorcerers Get All The Girls, this one was developed by the master of the tongue in cheek adventure game, Steve Meretzky. Reviewed in Issue 1, Spellcasting will appeal to any adventurer who doesn't take things too seriously.

Rated 7

WONDERLAND

Virgin, £34.99

An adventure built and played through an all-new 'Windows-style' user interface, Magnetic Scrolls' Wonderland turns Lewis Carroll's masterpiece into an absorbing beautiful game.

ARCADE STRATEGY

DRAGON'S BREATH

Palace, £31.64

Almost a board game in its style (although this is definitely a computer original), Dragon's Breath sees three human or computer-controlled players do battle through growing and nurturing battle dragons. Curiously underrated.

ELITE PLUS

MicroProse, £39.99

Not so much a sequel as an upgrading of the classic space trading game. The aim is to achieve elite status in the areas of combat, trading and piloting your ship. The space battles are immensely fun, providing a clean contrast to the trading sections.

GODS

Renegade, £34.99

Reviewed in Issue 4, this was the first attempt at an arcade adventure by the Bitmap Brothers. "The best platform game to appear on the PC to date."

Rated 8

CIVILIZATION

MicroProse, £39.99

From the pen of Sid 'Railroad Tycoon' Meier, Civilization (reviewed in Issue 1) takes the player on a power trip through history. As the leader of a pre-historic wandering tribe you start out by finding a place to settle, expanding your population and the lands they inhabit. Slowly you lay the foundations of a society, building roads, towns, cities etc, and prepare for attacks from barbarian tribes. An immensely satisfying strategy game of planning, conquest, negotiation and exploration. Thoroughly addictive.

Rated 7

KING'S QUEST V

Sierra, £44.99

Roberta Williams' King's Quest was the original animated adventure game – and over the years the series has gone from strength to strength. Highly entertaining and user-friendly, this is well worth clearing out your hard disk for.

OPERATION STEALTH

US Gold, £30.99

A Bond-style adventure featuring the impressive Cinematique user-interface as developed by the groundbreaking French development team, Delphine.

POWERMONGER**Electronic Arts, £29.99**

Bullfrog's next one on from Populous didn't have quite the same impact as its predecessor, but it remains a classic wargame and graphically impressive to boot.

There is an option to connect computers together via a modem or direct cable so two human players can compete head-to-head. The game also supports a network option allowing four-player competition.

The amount of detail in the game is incredible – birds rustling feathers, voices of blacksmiths in their workshops and cheering. An epic entertainment. Check out the review in Issue 3.

Rated 8**SIM CITY****Infogrames, £30.64**

Another game to have spawned a thousand clones, Maxis' mix of town planning, crisis management and downright megalomania has achieved the impossible – to make urban politics fun! Build up your town from a green field site, populate it with people, give them a transport network and services, and then try to maintain law and order as they take on a life of their own. Definitely not to be missed.

SIM EARTH**Ocean, £40.86**

Not so much a world manager as a world builder, Maxis followed Sim City with an educational tool based on the

Gaia hypothesis and puts the player in charge of every single aspect of a living planet, from the raising and lowering of land masses to the creation and population of the seas. The program is enormously flexible. You need a 286 or above to really appreciate the game. Complex in the extreme, and detailed enough to keep your interest for many months.

STELLAR 7**Dynamix, £44.99**

Remember the original arcade game Battlezone? Dynamix' interpretation is a bit more colourful, but thankfully the old-fashioned game play has not been thrown out with the old-fashioned presentation. It's just as addictive now as then.

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While we aim to make the buyer's guide as comprehensive as possible we need your help to keep our readers informed of all your special offers and promotional deals. If you have any forthcoming promotions or special offers which would be of interest to PC owners, let us know and we'll tell our readers.

ATTENTION: READERS

We hope that you've found the buyer's guide useful and entertaining, but we also want to keep improving it to meet your needs. Tell us what you like or dislike, what sections you'd like to see added or changed, and we'll do our best to accommodate the most popular suggestions. Please write to us at:

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Buyers' guide

Because all of us here at *PC Review* are PC users as well as reviewers we're perfectly placed to know that shopping for your PC can be a veritable nightmare, even if you're looking for something as simple as a joystick. The PC's open architecture has meant that expanding the machine is a fairly simple operation, but it's also meant that, during its 10 years of existence, the machine has attracted an enormous number of manufacturers of both hardware and software. The choice facing the potential buyer is vast and continually growing.

That's why we've set aside more than 10 pages in each issue to guide you through the quagmire of hardware and software. Within this section you'll find up to date information on the very best hardware and software available. Not only will we tell you what you can buy, but where you can buy it from and how much it will dent your pocket.

We don't claim that the guide in a single issue is exhaustive, but over the course of a few months you'll find it builds up into an invaluable reference work for PC buyers.

Happy browsing!

HOW TO USE THIS GUIDE

We've divided the guide into four easy to use sections: **Hardware** lists add-ons and upgrades that will improve your PC's performance or add features not available on the basic model; **Software** gives you a run-down of a wide-range of productivity software and utility programs; **Ancillary** is for those of you who want to invest in a new machine or simply keep your existing machine in tip-top condition.

Within each section you'll find that we've listed the basic capabilities of each product as well as any major plus or minus points. If you're a little confused by Technospeak (and aren't we all from time to time) just turn to our *Technical Terms* panels for a simple explanation.

All of the prices given are inclusive of VAT at 17.5%, although where there is no recommended retail price for a particular product we've listed the average price, thus: £550. Please bear in mind that these prices do not include postage and packaging, courier charges, etc.

If you require further details on a product then simply look up the supplier in our directory where you'll find an appropriate telephone number and address.

What could be simpler?

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Anyone - suppliers, publishers, readers - who knows of products suitable for inclusion but which have mysteriously been omitted can write in with details (write, please, don't phone) to the address at the front of the magazine.

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MEMORY UPGRADES

Most PCs will take extra memory chips, either on a slot-in card, or directly onto the motherboard – and just as well, given the latest crop of memory hungry games. The minimum RAM acceptable these days is 640K; some older PCs (such as the Amstrad PC1512) were sold with 512K. However, an increasing

number of games make use of extended or expanded memory above 640K, and you'll need a good 2Mb should you ever want to run Windows. The prices quoted here are for a selection of IBM and Amstrad machines. Prices for other clones may vary.

Size/Type	Price	Comments	Supplier
1Mb/Card	£94	For IBM XT	Memory Direct
2Mb/Card	£146.88	For IBM XT	Memory Direct
2Mb/Card	£164.50	For IBM AT	Memory Direct
2Mb/Card	£246.75	For IBM AT (LIM 4)	Memory Direct
4Mb/Card	£339.57	For IBM AT (LIM 4)	Memory Direct
640K/Chip Set	£29.95	For Amstrad PC1512	Evesham Micros
4Mb/Chip Set	£160	For Amstrad PC2286	Evesham Micros
16Mb/Chip Set	£815.45	For Amstrad PC2386	Memory Direct

TECHNICAL TERMS

The original XT's and AT's could only directly address a maximum of 640K of RAM, but there are two methods of extending the available RAM on these machines. The first is known as **Extended Memory** (memory located above the first megabyte which can be directly addressed by the 80286 and its successors), while the alternative is **Lotus Intel Microsoft Expanded memory Specification (LIM EMS)**, named after the three companies that developed it. **LIM 4** is the latest version of this, designed to work with DOS version 4.0 and beyond. Most software that uses extended or expanded memory is configured to work with only one of these systems, so you should check which of them your applications support before you make a buying decision.

HARD CARDS

No room for a hard disk drive? Want a simple plug in, cheaper solution? Hard cards fit into a free expansion slot and can be used as a conventional hard drive.

• *The XL versions of Time's Smartcards are supplied without driving software. If you wish to buy the version with the software please add £47 to the listed price.*

Model	Type	Capacity	Speed	Width	Price	Supplier
Smartcard 30XL	XT/AT	32Mb	24ms	1 Slot	£205.62	Time
32MbXT	XT	32Mb	40ms	1.5 Slots	£186.83	RSC
Smartcard 40XL	XT/AT	40Mb	24ms	1 Slot	£229.13	Time
45MbXT	XT	45Mb	19ms	1 Slot	£233.83	RSC
45MbAT	AT	45Mb	19ms	1 Slot	£233.83	RSC
Smartcard 100XL	XT	100Mb	19ms	1 Slot	£417.13	Time
Smartcard 100XL	AT	100Mb	19ms	1 Slot	£534.63	Time

TECHNICAL TERMS

Cards which occupy **1.5 slots** will prevent you from plugging a full length card into the adjacent expansion slot, so check the arrangements of existing cards in your PC and plan carefully if you intend to utilise any unoccupied slots in the future. The **speed** of a card is an indication of its average **seek time** (the time it takes for the read/write heads to reach the appropriate location on the disk).

• *RSC's cards are supplied with a free copy of Norton Utilities v.5 (RRP £139)*

HARD DISKS

Model	Interface	Capacity	Speed	Size	Price	Supplier
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Seagate ST351A/X	AT/XT	42Mb	28ms	3.5" 1" high	£193.88	Dataplex
Seagate ST125A	IDE	21Mb	28ms	3.5" half height	£170.38	Corporate Upgrades Ltd
Seagate ST157A	IDE	44Mb	28ms	3.5" half height	£163.33	Corporate Upgrades Ltd
Seagate ST225	MFM	21Mb	65ms	5.25" half height	£135.13	Dataplex
Conner CP3024	IDE	21Mb	27ms	3.5" 1" high	£176.25	Unimart Computers Ltd
Conner CP3044	IDE	42Mb	25ms	3.5" 1" high	£217.38	Unimart Computers Ltd

TECHNICAL TERMS

You can only fit an internal hard drive if you have a suitably sized spare drive port in your machine. If you are at all unsure you should first check with the supplier of your machine which size of hard drive you will be able to fit. There are a number of different hard drive interfaces in use so make sure that you buy the appropriate drive.

If you're using a PC which has only floppy disk drives, then a hard drive could change your life. With capacities ranging from 20Mb to well over 100Mb (more in business heavyweight machines), you can store all your programs, all your data, on the one drive, and still access it far more quickly than on floppy. No more disk-swapping every five minutes, no more booting DOS from floppy every time you switch on. Also, more and more games these days actually require you to install them on a hard disk.

GRAPHICS CARDS

The PC has had a long and chequered history of different graphics standards, thanks to IBM's decision not to include graphics at all in the original machine. The current best standard now for games is VGA (Video Graphics Array): with a maximum of 256 colours on-screen, this really shows off the potential of PC games.

Type	RAM	Size	Resolution	Colours	Price	Supplier
Hercules	64 Kb	8-Bit	640x350	2	£28.20	Watford Electronics
CGA	64Kb	8 bit	320x200	4	£37.60	Watford Electronics
EGA	256Kb	8-Bit	640x350	16	£76.38	Watford Electronics
VGA	512K	16 bit	1024x768	256	£92.83	Dataplex
SVGA	1Mb	16 bit	1024x768	256	£92.83	DS Computers

Watford Electronics graphics cards are all supplied with a built-in parallel printer port.

SOUNDBOARDS

Until recently, the best the PC could produce in the way of sound was 'beep'. But the advent of soundboards has changed things dramatically. A soundboard will take up a single expansion slot and produce genuine music and background sound effects in the games which support it – which is an ever-increasing number these days. Below are the 'standard' soundboards catered for by most titles.

Name	Supplier	Price
AdLib	Mindscape	£89.99
Comment	Currently the most popular system, and a good trade-off between price and performance.	
LAPC-1	Roland	£379.00
Comment	Superb sound quality probably priced out of the reach of many game players. Non AdLib-compatible.	
SoundBlaster v2.0	WestPoint Creative	£139.95
Comment	AdLib-compatible and capable of producing sampled sounds. Try it with Wing Commander 2 to hear what we mean!	
SoundBlaster Pro	WestPoint Creative	£249.95
Comment	Has all the features of soundblaster, but is compatible with many CD ROM games.	



JOYSTICKS

No provision is made in the design of the standard PC to plug a joystick in directly. You'll need a joystick card in one of your expansion slots which allows an analogue joystick to be plugged in. A number of manufacturers sell both cards and joysticks together. For flight sims and racing games, yoke and pedal style controllers are also available.

- The Tecniche stick is available without games card for £17.61
- The Analog sticks are both available without games cards for £12 and £15 lower than the marked prices respectively.

Product	Price	Supplier	Comments
Anko AK-GC27A	£19.95	ABS Computer Supplies	Auto-fire option
IBM Joystick	£19.95	Computer Mates Ltd	Includes games card
Powerport 2	£63.45	Power Mark	Self-adjusting PS/2 Twin Port
The Yoke	£57.58	Power Mark	Self-centring Yoke
Gravis Analogue Stick	£48.18	Power Mark	8 Tension adjusters!
Tecniche PC Power Stick	£23.49	RSC Ltd	Includes games card
Analog Edge	£29.99	Evesham Micros	Includes games card
Analog Xtra	£39.99	Evesham Micros	Includes games card
Gravis PC Mousestick	£89.95	RC Simulations	Includes games card

MICE AND TRACKBALLS

Many games are tailored to be easily controllable with a mouse, which is much more of a standard PC add-on than a joystick. Then again, there is the trackball, which in effect is an upside-down mouse, with you moving the ball directly to control on-screen movement – useful if your desk space is limited or you're using it with a portable machine.

Product	Price	Supplier	Comments
Genius GM6000	£28.95	ABS Computer Supplies	Includes pocket, pad and software
Genius GMF302	£37.95	ABS Computer Supplies	As above, higher resolution

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Unit A17
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Watford WD1 2AT
Tel: 0923 213494

3 Chevy Chase
Eldon Square Centre
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Tel: 091 230 0239

GAME LIMITED

Product	Price	Supplier	Comments
Anko AKTB500	£49.95	ABS Computer Supplies	Trackball with 'drag button'
Logitech Mouseman	£62.28	Acolyte Services	Uses radio technology
Cordless Mouseman	£116.33	Acolyte Services	
Logitech Pilot	£45.83	Dataplex	
Tec-Mouse	£34.08	Dimension Computers Ltd	Includes paint software
Microsoft Ballpoint	£104.58	Dimension Computers Ltd	Trackball for portables
Amstrad Mouse	£22.33	Dimension Computers Ltd	Works with Amstrad PCs
Axelen Mouse	£21.15	DS Computers	
Truemouse	£22.99	Evesham Micros	Serial/ PS/2 /Amstrad versions
Cordless Truemouse	£49.95	Evesham Micros	As above but with infra-red link
Golden Image Mouse	£34.95	Evesham Micros	Optical Mouse
Trackball	£39.99	Evesham Micros	Features lock drag
Mousepen	£116.33	KSI	Mouse shaped like a pen
Unmouse	£159.80	Picture Perfect UK Ltd	Tablet - use finger as
mouse!Nakasha Mouse	£41.13	RSC Ltd	Includes DPaint II
Squik Mouse	£19.98	RSC Ltd	Low cost serial mouse

TECHNICAL TERMS

A Mouse or Trackball requires a suitable **driver** to be installed before it will operate. Most devices are supplied with suitable software, but you should check first with the manufacturer. You should also note that there are different types of mice and trackballs designed to work with different systems (eg **Serial** and **Microsoft Compatible**), so make sure that you are buying the device that is correct for your model of PC.

MODEMS

Get your PC to be more sociable. A modem will connect you to other PCs via the telephone lines, giving you access to bulletin boards, public database networks and multi-user games - or you can simply use it to send messages to friends.

Product	Price	Manufacturer
Biscom (internal)	£258.50	Dataflex
Biscom (external)	£323.13	Dataflex
Comfax (internal)	£387.75	Dataflex
Comfax (external)	£517.00	Dataflex
Courier 2400e Quad (internal)	£464.13	Miracom
Courier 2400e Quad (external)	£522.88	Miracom
Keycard 3000 V22	£346.63	Miracom
Keycard 3000 V22 BIS	£464.13	Miracom
PC Professional	£517.00	Dataflex
Quadcom (internal)	£387.75	Dataflex
Quadcom (external)	£517.00	Dataflex
Rapier (internal)	£646.25	Dataflex
Stradcom (internal)	£193.88	Dataflex
Stradcom (external)	£229.13	Dataflex
WS4000 (SB2422)	£186.83	Miracom
Quattro 2400	£500.00	Dowty
Smartmodem 2400 Quad	£339.57	Hayes
SM2400	£222.08	Amstrad
Milgo Maxam IV	£468.83	Racal
2400 MNP Class 5	£468.83	Worldport

TECHNICAL TERMS

PC Modems come in two types: **internal** and **external**. Internal versions require a spare expansion slot, but they are usually £50 to £100 cheaper than their external counterparts. External versions plug into a **serial port** instead. If you are going to use your modem mainly to communicate with one other party (e.g. a particular bulletin board) then you should first check which **protocol** is in use by them and buy the appropriate modem.

DOT-MATRIX PRINTERS UNDER £300

Dot matrix printers are coming down in price, but at the same time the quality is improving: letter quality modes are no longer dotty or lacking true descenders on letters such as 'g' or 'y'. This is particularly true of models with a 24-pin printhead. This is probably a good time to buy.

Company/model	Price	Speed	Buffer	Type
Amstrad DMP3160	£233.83	160/40	16K	9-Pin
Brother M-1209	£264.38	168/35	2K	9-Pin
Citizen 124D	£292.58	120/40	8-32K	24-Pin

Company/model	Price	Speed	Buffer	Type
Epson LX850	£269.08	200/30	4-32K	9-Pin
Mannesmann Tally MT81	£186.83	155/26	8K	9-Pin
Olivetti DM109	£257.33	240/36	21K	9-Pin
Panasonic KX-P1180	£252.63	192/38	2-K	9-Pin
Samsung SP 0930N	£222.08	300/50	3-11K	9-Pin
Seikosha SP1900AI	£116.33	192/40	1K	9-Pin
Seikosha SP2000	£233.83	160/40	6K	9-Pin
Victor VP10D	£210.33	175/30	None	9-Pin

TECHNICAL TERMS

A printer's **speed** is a measurement of the number of characters it can print per second. The first figure is for **draft mode** and the second figure is for **Near Letter Quality (NLQ) mode**. The **Buffer Size** is an indication of the amount of internal memory the printer has. The higher this figure is, the quicker your PC will be released to perform other tasks.

INK JET PRINTERS

Ink jets are the newly fashionable item for style-conscious PC owners: with distinctly better print quality than dot matrix, the advantage of being virtually silent.

Company	Model	Price	Speed (Pages per minute)	Resident fonts
Mannesmann	Tally	£1,099.4	pp	14 bitmap
Seikosha	OP-104	£940	4	14 bitmap
Hewlett-Packard	LaserJet III	£1,749	8	8 Scalable
Samsung	SL-1081A	£891	8	24 bitmap
Oki	OL830	£1,499	8	7 scalable Adobe
Oki	OL400	£899	4	25 bitmap
Olivetti	PG308	£1,399	4	24 bitmap
AEG	Laserstar 6	£999	6	9 Fonts

LASER PRINTERS

Laser printers have the same advantage of being quiet as ink jets and while they are not much more expensive, the resolution is markedly better. Laser printers are rapidly replacing dot matrix models as the standard office 'workhorse'.

Company	Price	Speed	Buffer
Brother HJ100	£405.38	142/83	37K
Canon BJ300	£699.13	300/150	30-128K
Epson SQ850	£903.58	600/198	8K
Hewlett-Packard DeskJet 500	£586.33	240/120	16K
IBM 4072 ExecJet	£868.33	600/300	30K
Mannesmann Tally MT9	£938.83	220/110	32K
Olivetti JP350	£586.33	360/120	8K

EXTERNAL DRIVES

If you don't have space for any more floppy disk drives - a problem with newer slimline models, you can always add an external model.

Model	Size	Capacity	Price	Supplier
IBM compatibles	3.5"	720Kb	£109.95	ABS Computer Supplies
IBM Compatibles	3.5"	1.44Mb	£119.95	ABS Computer Supplies
IBM Compatibles	5.25"	360Kb	£119.95	ABS Computer Supplies
IBM Compatibles	5.25"	1.2Mb	£129.95	ABS Computer Supplies
Amstrad 2000 range	5.25"	360K	£57.58	RSC Ltd
Amstrad 2000 range	5.25"	1.2Mb	£76.38	RSC Ltd
Olivetti/Amstrad 3000s	5.25"	1.2Mb	£175.08	RSC Ltd

CD ROM DRIVES

Are you looking to make your PC the ultimate games machine? Then a CD ROM drive is the perfect addition. CD ROMS offer a huge storage capacity, typically the equivalent of about 700 720Kb floppy disks! The only disadvantage is the slow access speed. There are not too many games or other CD ROM applications available at the moment, but the list is growing larger every month.

Model	Price	Supplier	Comments
Chinon CDS431	£351.33	SMC Computers	Internal
Goldstar GT2000	£398.33	SMC Computers	External
Philips CM50	£316.08	Diamond Computers	Portable

•The Philips drive comes with a free copy of *World Atlas and Audio Player*

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HAND SCANNERS

If you use any sort of Desktop Publishing package, then a hand scanner is an invaluable addition to your PC. While most hand scanners can only read small images and at a relatively low resolution, they are considerably cheaper than flatbed scanners.

- The PC Hand Scanner comes with a free copy of Microsoft Windows.
- The Marstek M105 Plus and M800 Plus are also available in versions for Windows. Add the suffix W to the model number and read the price as £139.83 and £186.83 respectively.

Model	Price	Colours	Supplier
AG-256	£164.50	256 grey shades	Watford Electronics
Genius GS-B105G	£176.25	256 grey shades	Reeves
PC Hand Scanner	£82.19	16 grey shades	UK Home Computers
Marstek M105	£81.08	64 grey shades	RSC Ltd
Marstek M105 Plus	£110.45	64 grey shades	RSC Ltd
Marstek M800 Plus	£169.20	64 grey shades	RSC Ltd
Marstek M-6000 CG Color Artist	£327.83	262,144 colours	RSC Ltd

DIGITISERS

While not being quite so high up on the essential DTP buy list as a scanner, a rudimentary digitiser can transform the appearance of your documents. Digitisers will allow you to import line-based artwork by tracing it with a stylus or puck. They're also ideal for Computer Aided Design applications.



GRAPHICS SOFTWARE

So you're the artistic type? If so then in the PC you have a potentially limitless canvas, not to mention a huge choice of software with which to realise your potential. Here's a selection of the best for budding Renoirs.

Product	Price	Supplier	Comments
VBase	£175.08	Highland Grafix	Full colour picture database
Clip Art	£5.88	Cybernetic Imagination	Range of disks containing 30 images each in PCX or IMG format
Deluxe Paint II Enhanced	£99.99	Electronic Arts	The standard cheap paint program for PCs
Deluxe Paint Animator	£99.99	Electronic Arts	One of a range of DPaint add-ons
Disney Animation Studio	£99.99	Empire	Cel animation package
Corel Draw v2	£270.25	Corel	Very popular and versatile
Designworks	£149.00	GST Software	New drawing package, comprehensive and great value

DTP SOFTWARE

The PC has always been a superb machine for DTP applications, and now that Windows 3 is firmly established this is even more the case. There are already a host of excellent DTP packages available for the PC at prices to suit every pocket. Here is just a small selection.

Product	Price	Supplier	Comments
Page Plus	£160.98	Serif	Budget priced page layout for Windows
Timeworks Lite	£41.13	GST	Simple DTP
Deskpress	£235.00	GST	Timeworks and more!
Pagemaker	£457.08	Aldus	Professional DTP package
Ventura Publisher	£587.50	Ventura	Professional DTP Package
Timeworks DTP 2	£116.33	GST	Improved version of the budget system

COMMUNICATIONS SOFTWARE

If you're one of those sociable types that likes to link-up, go on-line, and download from time to time then you're going to need some suitable software to get in touch with your fellow PC owners.

Product	Price	Supplier	Comments
Sage Chit-Chat	£66.98	Computers By Post	
Crosstalk	£71.68	Computers By Post	For Windows 3
Eazlink	Shareware	Various	Try before you buy!
Mirror 3	£121.03	Computers By Post	With teletext emulation
PC Anywhere IV	£101.05	Computers By Post	
Procomm Plus	Shareware	Various	Very Powerful System
Odyssey	£104.57	Shareware Marketing	Cost effective advanced comms

There are plenty of packages to choose from, especially in the Public Domain libraries. Here are a few we recommend you consider.

COMPOSING SOFTWARE

Gone are the days when you had to sit huddled over a second-hand Bontempi scratching notes onto a piece of torn manuscript. Most modern PC music packages make life a lot easier, some will even construct the score for you!

Product	Price	Supplier	Comments
Music Studio 3	£70.50	Datel	Sequencer, composer, score printing.
SPJunior	£163.325	Computer Music Systems	Music package
Sequencer plus Junior	£64.63	Computer Music Systems	64 track sequencer
Sequencer Plus Classic	£193.88	Computer Music Systems	500 track sequencer
Cadenza	£198.58	Digital Music	Sequencer with graphic editing
The Musicator	£368.95	Digital Music	Notation based sequencer
The Composer's Pen	£146.88	Composit Software	
Pianola	£29.38	Clockwork Software	
SongWright	£99	PC Services Scorewriting system	

ANTI VIRAL

It's a sad state of affairs that Anti-Viral software is needed at all, but unfortunately there are still lots of people out there in computerland who haven't grown up and think it's funny to wreck other people's work and enjoyment of their machine. Naturally the same people don't think it's very funny when it happens to them. If you are one of these people then may we express complete contempt for your activities on behalf of the computing community. If you're one of the remaining 99.9% of decent, honest computer users, here are a few useful pieces of software to protect you from the aforementioned nerds.

Product	Price	Supplier	Comments
<i>Dr Solomon's Anti-Virus Toolkit</i>	£69.33	<i>SGS International</i>	
Comments: £99 for 4 quarterly upgrades; £275 for upgrades, monthly newsletter and fax alerts. Complete kit of tools for identification, removal of and immunisation against the dreaded virus, with other disk goodies too.			
<i>The Computer Virus Protection Handbook (Colin Haynes)</i>	£27.00	Sybex	
ISBN 0-89588-696-0			
Comments: Includes 5.25" disk: The what, how and why of viruses including simulated ones on disk for quick recognition. Also covers disaster plans and industrial sabotage.			
<i>The Computer Virus Handbook (Richard B. Levin)</i>	£22.95	<i>Osborne McGraw-Hill</i>	
ISBN 0-07-881647-5			
Comments: Lots of advice and short programs to avoid virus attacks. Covers hard disks too.			
<i>PC Immunitie II</i>	£39.95	<i>SA Software</i>	
Comments: Protects hard and floppy disks and files with three levels of detection and help screens.			
<i>Virus Buster</i>	#95	<i>VB Software</i>	
Comments: Comprehensive and easy to install software. Checks for more than 550 viruses; first update free then #50 per year for maintenance.			
<i>Norton Anti Virus Version 1.5</i>	#149	<i>Symantec</i>	
Comments: Comprehensive, provides protection against 700 viruses, price includes opportunity to attend Virus Clinic and access to Virus InfoLine for latest information.			

MISCELLANEOUS UTILITIES AND PRODUCTIVITY SOFTWARE

Can't find what you're looking for in our other software sections? Then you'll probably find it here. Below we present a pot pourri of the very best of the rest.

Product	Price	Supplier	Comment
Autoroute Express	£61.10	NextBase	First rate route planning software
Coursemaster	£29.38	IntraSet	Betting aid for flat & hunt racing
Eight In One Gold	£115.15	Logman Logotron	Integrated WP, spellchecker, outliner, spreadsheet, database etc.
Flexibak Plus	£35.25	Nildrum	Hard disk back-up utility
Framework IV	£458.25	Ashton-Tate	One of the better integrated systems
LogoLink	£34.08	Locomotive	Transfer files PCW-PC
Microtext Adaptor	£198.58	Microtext	Half card adding teletext to your PC
Mini Office Personal	£29.38	Europress	Database, WP, spreadsheet, label printer and comms.
Money Manager	£58.75	Connect Software	Household Finance
PC2 Teletext	£176.25	Microboss	External teletext adaptor and software
Printing Press	£45.83	Power Up	Make letterheads, posters etc
ProBook	£52.88	BBHW	Database and address book
Scoredraw	£72.00	RDN	Comparative analysis system for football result prediction

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Product	Price	Supplier	Comment
Trackmaster	£20.00	Intraset	Greyhound racing tipster
Xtree Easy	£58.75	Softsel	DOS File manager
386^MAX	£79	International Data Systems	Memory Manager
Hijaak	£95	Software Paradise	Easy to use screen capture programme
Fast Lynx	£124.95	Ctrl-Alt-Deli	File transfer between PCs
Mace Utilities	£59.00	Software Construction Co	Intelligen full function disk recovery and optimiser.
Magellan	£115	Lotus Development	File viewer that finds a file in seconds.
Microsoft Works	£145		Capable and comprehensive integrated package
Microsoft Works for Windows	£145	Windows 3	Integrated package - excellent value
Microtext Adaptor	£198.58	Microtext	Half card adding teletext to your PC
Mini Office Personal	£29.38	Europress	Database, WP, spreadsheet, label printer and comms.
Norton Utilities Version 5	£100	Symantec	Classic disk recovery & optimiser
Pinch and Punch 5	£30	Iolo Davidson	Simple to use screen grabber
PC Tools V 7	£139	Central Point Software	Good range of easy to use utilities
ProBook	£52.88	BBHW	Database and address book
Professional Master Key	£25	Shareware	Shareware counterpart of Norton utilities
QEMM	£55	Quartermaster	Memory Manager
Spinrite II	£89	Software Paradise	A disk optimiser specially designed to detect and correct disk problems before they occur
System Sleuth	£99.95	Megatech	Tells you what's inside your PC

PORTABLES

Whether for games or more serious use, a portable enables you to take your programs with you. Most are best used when you are able to plug into the mains on-site: battery power normally lasts between 1.5 to 3 hours. Portables are now becoming genuinely slim and light enough to carry around in comfort.

Company/Model	Price (ex. VAT)	Speed	Disk Size	RAM
Screen	Slots	Weight	Size (mm)	
Amstrad ACL-386SX	£3,999	20 Mhz	120 Mb	4 Mb
VGA LCD	Yes	8.0 Kg	320x400x113	
Compaq SLT 386S/20	£4,195	20 Mhz	60 Mb	2 Mb
VGA LCD	Yes	6.4 Kg	106x343x216	
Dell System 320LT	£1,999	20 Mhz	20 Mb	
VGA LCD	Optional	6.8 Kg	318x89x360	
Epson AX 3/33	£5,999	33 Mhz	80 Mb	4 Mb
VGA LCD	Optional	7.8 Kg	360x325x110	
NEC Prospeed 286	£3,145	16 Mb	40 Mb	1 Mb
VGA LCD	No	6.8 Kg	330x376x89	
Olivetti A12	£1,199	12 Mhz	20 Mb	1 Mb
CGA LCD	No	2.95 Kg	297x210x52	
Panasonic CF-270	£2,195	16 Mhz	20 Mb	1 Mb
VGA LCD	No	3.1 Kg	310x245x44	
Philips PCL101	£799	10 Mhz	No	1 Mb
CGA LCD	No	1.6 Kg	220x280x28	
Samsung 386S/16	£2,220	16 Mhz	60 Mb	1 Mb
VGA LCD	No	3.2 Kg	297x213x51	
Sanyo MBC-17NB	£1,495	12.5 Mhz	20 Mb	1 Mb
VGA LCD	No	3.2 Kg	310x255x52	
Sharp PC-8501	£7,995	20 Mhz	100 Mb	2 Mb
VGA LCD	No	6.9 Kg	318x399x94	
Tandy 1500HD	£1,300	10 Mhz	20 Mb	1 Mb
CGA LCD	No	2.7 Kg	309x245x94	
Toshiba T3100SX	£3,850	16 Mhz	40 Mb	1 Mb
VGA Plasma	Optional	6.8 Kg	360x310x80	
Zenith Supersport SX	£2,795	16 Mhz	40 Mb	1 Mb
VGA LCD	No	7.7 Kg	380x310x85	

MAINTENANCE AND REPAIR

A variant of Parkinson's Law states that your computer probably won't go wrong while you still have that 12 month, on-site warranty intact. Once it expires, that's when the machine will start playing up. Below we list some of the companies which will provide you with a service contract and then come to your rescue.

Company	Price	Duration	Call Out
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FMG	Up to £470 PA	5 years	Next day
Kalamazoo	9-12% of value	5 years	8 hours
Newbury Data	6-12% of value	Flexible	8 hours
Response	8-11% of value	Flexible	8 hours



Below you'll find contact numbers and addresses for all the suppliers we've mentioned in the sections covering hardware and serious software.

ABS Computer Supplies	071 224 8320
4 Shouldham Street, London, W1H 5FG.	
Acolyte Services	041 848 0055/0066
Victoria Buildings Business Centre, Violet Street, Paisley, PA1 1PA.	
AEG Olympia	
The Ridgeway, Iver, Bucks SL0 9HX	0753 630111
AEM	0684 850505
Unit 4, Tewkesbury Ind Est., Green Lane, Tewkesbury, Glos., GL20 8HD	0800 252221
AKORE Limited Shareware	
7 Fishergate Point, Lower Parliament Street, Nottingham NG1 1GD	
Freepost, Akore, Nottingham, NG1 1BR	
Amstrad (Centresoft)	021 625 3302
Amstrad plc	0277 262326
PO Box 462, Brentwood, Essex, CM14 4EF	
Brother	
Shepley Street, Audenshaw, Manchester M34 5JD	061 330 6531
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Citizen Europe	0895 272621
Wellington House, 4/10 Cowley Road, Uxbridge UB8 2XW	
Compaq	081 332 3000
Hotham House, 1 Heron Square, Richmond TW9 1EJ	
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10 Leasowe Green, Lightmoor, Telford, Shropshire, TF4 3BR	
Compuadd	0272 637488
7 Great Western Way, Bristol BS1 6HA	
Computer Manuals	021 706 6000
50 James Road, Tyseley, Birmingham B11 2BA	
Computer Mates	0753 631101
Pinewood Studios, Iver Heath, Bucks, SL0 0NH.	
Computer Music Systems Ltd	071 482 5224
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12 Sutton Lane, Banstead, Surrey, SM7 3QP.	
Connect Software Ltd	081 743 9792
3 Flanchford Road, London, W12 9ND	
Corel	0703 899321
Xitan, 1-4 Chevron Business Park, Lime Kiln Lane, Holbury, Southampton SO4 1QL	
Corporate Upgrades Ltd	081 861 2370
Premier House, 2 Daton Road, Harrow, Middx HA1 2XU	
Ctrl-Alt Dell	0908 662759
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Cybernetic Imagination Systems Ltd	0923 252196
21A Church Road, Watford, Herts, WD1 3PY	
Datacom	0256 763911
Landata House, Station Road, Hook, Hampshire RG27 9JF	
Dataflex	081 543 6417
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Dataplex	0753 535557
129 Bath Road, Slough, Berks, SL1 3VW	
19 High Street, Old Town, Swindon, Wilts SN14 4EG	0793 488448
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Diamond Computers	0533 517479/621874
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Digital Music	071 281 5096
27 Leven Close, Chandlers Ford, Hants, SO5 3SH	081 452 4444
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Dimension House, High Street, Leicester, LE1 4FP.	0386 765500
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DS Computers	081 848 1858
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Epson	071 436 2244
Campus 100, Maylands Avenue, Hemel Hempstead, Herts, HP2 7EZ	0257 276800
Evesham Micros	0453 860872
Unit 9, St. Richards Road, Evesham, Worcs, WR11 6XJ	021 411 2266
FMG Ltd	0442 61122
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GST	0344 891313
Meadow Lane, St Ives, Cambridgeshire PE17 4LG	0223 323656
Hayes Microcomputer Products Inc	0784 455445
1 Roundwood Avenue, Stockley Park, Uxbridge, Middx UB11 1AE	0705 5956947
Hewlett Packard	0734 788711
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Highland Graphix Ltd	0702 552911
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IBM	0252 316060
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International Data Systems	0707 276100
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Iolo Davidson	0784 460007
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Kalamazoo	0702 444535
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Kodak	0702 444535
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KSI	0702 444535
Unit 1, Braxton Courtyard, Lymore Lane, Milford-On-Sea, Lymington, Hants SO41 0TX	0245 265017
Logitech	0702 444535
Hawes Hill Court, Drift Road, Windsor, Berks SL4 4QQ	0245 265017
Longman Logotron	0702 444535
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1 Victoria Road, London, W3 6UL	0245 265017
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Newstar International	0702 444535
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PC Services	081 658 7251
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Panasonic House, Willoughby Road, Bracknell, Berks RG12 8FP	
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Picture Perfect UK Ltd	0264 333643
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Precision Software	081 330 7166
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Prestige Network Ltd	0276 60073510
Reynolds Green, Camberley, Surrey, GU15 4FL	
PC-Sig UK	081 877 1103
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Psion	071 262 5580
85 Frampton Street, London NW8 8NQ	
Quarterdeck	0245 496699
The Widford Hall, Widford Hall Lane, Chelmsford, Essex CM2 8TD	
RDN Datasystems Ltd	0424 752288
PO Box 44, Hastings, East Sussex, TN34 2SY	
Reeves PLC	0604 671277
Technology House, 75 Tenter Road, Hanson Business Park, Moulton Park, Northampton NN3 1PZ	
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Roland UK Limited	0252 816181
Rye Close, Ancells Business Park, Fleet, Hampshire GU13 8UY	
RSC Corporate Computing	0923 243301
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Samsung	081 391 0168
Samsung House, 225 Hook Rise South, Surbiton, Surrey KT6 7LD	
Sanyo	0923 246363
Otterspool Way, Watford TD2 8JX	
SA Software	081 998 2351
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Seikosha	0753 685873
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Serif (Europe) Ltd	0602 421502
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Sharp	061 205 2333
Sharp House, Thorpe Road, Newton Heath M10 9BE	
SMC Computers	0573 550333
26 Farnham Road, Slough, Berks SL1 3TA	
Softsel UK	081 568 8866
Softsel House, 941 Great West Road, Brentford, Middx	
Software Paradise	0800 378873/0222 887521
Avenue House, King Edward Avenue, Caerphilly, Mid Glam CF8 1HE	
Symantec	0628 776343
MKA House, 36 King Street, Maidenhead, Berks SL6 1EF	
Tandy	0922 710000
Tandy Centre, Leamore Lane, Walsall WS2 7PS	
Technomatic	081 205 9588
Techno House, 468 Church Lane, London, NW9 8UF.	
Time	0254 691822
Time House, Devonport Road, Blackburn, Lancs, BB2 1EJ	
Total Control (UK) Ltd	0488 685299
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Unit 22, Cheney Manor Industrial Estate, Swindon, Wilts, SN2 2PJ	
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2 Popes Court, Popes Avenue, Twickenham, Middx TW2 5TR	
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Introducing shareware

Although shareware has been in existence for several years, many PC users are unclear as to exactly what it is.

There is such a wide choice of software these days that it can be very difficult and costly to choose the right program for an application. The only realistic way to know whether a program is suitable is to try it out first. With shareware you can do just that.

The basic principle is that users can obtain shareware programs for just a few pounds from an authorised shareware vendor. If they find them useful, they are

asked to make a payment, directly to the author and register themselves as a user. By registering, they can expect printed manuals, updates and technical support from the author.

The amount and level of support required and documentation depends upon the complexity of the program.

The registered version of a game, may, for example, be just £5 but a full Business Finance package could be £125 or so.

However in most cases, the registered version is likely to be considerably cheaper than the

equivalent commercial program.

Of course, if a program is not found suitable, the user just re-formats the disk and uses it for something else.

Shareware software is NOT public domain. It is copyright software in the same way as any regular commercial program is – it's the method of promotion and distribution that differs.

Public domain software is where the author has relinquished his or her copyright permitting others to distribute the software. There is no request for payment from the author.

ABOUT THIS REVIEW SECTION

The purpose of this section of PC Review is to offer concise but informative reviews of what we believe to be the best programs in each respective category.

We offer a points out of ten score based on three criteria:-

1. How well does it perform the task?
2. How easy is it to use, particularly in terms of getting started?
3. Understandable documentation and help files.

Each review identifies the name of the program, author and the registration fee, where known.

In popular fields there are often many different programs available to cover a particular function. In these cases the standards are very high and consequently the rating is higher. There would be no point in offering you a sub-standard program in a well-served category.

However, in more specialised fields, there will be relatively few programs available so there may be cases when a lower rating will have to be tolerated as there is no better alternative.

Shareware programs may be obtained from a variety of sources. However, for your convenience, we have arranged that all programs featured in this review may be obtained from one source – Advantage which is a well-established, authorised shareware mail order company, based in Cheltenham.

PC Review readers can order their disks directly from Advantage either by phone, fax or post and can expect fast delivery. Advantage will also provide getting started support and advice.

As a special offer to PC Review readers, Advantage is offering a 25% discount on its regular price of £3 a disk – quote PC Review when calling or use the special priority order form at the end of this section and get your disks for just £2.25 each (both 5.25" and 3.5") including VAT.

WHICH COMPUTER?

There are so many varieties of computer and operating system (DOS) around today we cannot guarantee that all programs will work on all computers. However most programs run on a 512K RAM PC compatible running MS-DOS version 2.0 or above. A single floppy drive is usually acceptable but a dual drive or hard disk is more beneficial not just for these programs but for most of your other work as well.

A code is placed by each program if the minimum requirement is more than a basic PC compatible with a Hercules mono monitor:

CGA: Colour Graphics Adapter required with Colour Monitor.

EGA: Enhanced Graphics Adapter required with high resolution monitor.

VGA: Video Graphics Array required with high resolution monitor.

HD: Hard Disk Drive required.

Mono and CGA programs will run on an EGA or VGA monitor. Also, many CGA programs will run on a mono monitor if you load a CGA emulator program (also available as shareware).

Programs are written by a USA author unless otherwise stated.

Programs which make use of a printer expect to find an IBM or Epson-compatible. Most modern printers are.

If you have any questions about shareware or wish to discuss your requirements please call Advantage (not PC Review) on (0242) 224340.

SHAREWARE REVIEWS

PERSONAL ORGANISERS

Calendar Mate

(one disk)

Author: Hawk Software

Registration: \$22

Performance: 8/10

Ease of Use: 9/10

Calendar Mate is designed to create personalised calendars. The user defines events to the program and it will display them on the calendars when printed. There are three types of calendars that can be printed - a monthly block calendar, a one page yearly calendar and a daily appointment calendar/scheduler. The monthly calendar can display up to three events per day.

In addition to the attractive printed calendars, Calendar Mate's can handle different types of repeating events - simple intervals like 'yearly', 'weekly' or 'third Monday of the month' or 'Wed-Fri' for example. It can even delete or reschedule single occurrences of a repeating event.

Defining events to the system is a simple task. Much effort has been invested in making the program intuitive and user friendly. There is context sensitive help available anywhere in the program.

As well as the simplicity and ease of use built into the program there are several powerful features including

Early Bird

Author: Allan Computer Products

Registration: \$30

Performance: 8/10

Ease of Use: 8/10

There are several programs available which offer desktop diary and appointments functions. Most of them are 'memory-resident', that is, they are available at the touch of a key, while you are in the middle of another application, for example your WP or Accounts.

Early Bird is probably one of the best user-friendly, full-featured reminder and calendar programs available.

It features simple or complex reminder types (for instance, third from the last Thursday of every ninth month), desktop calendar and scan (AUTOEXEC.BAT) modes, colour pull-down and pop-up menus, context sensitive on-line help, alarm, DOS shell, mouse support, file manipulation commands, and selectable group printing.

In addition, Early Bird offers user definable classes, notice, print, colour and display options, special sound and visual effects and reminder creation defaults. Once you try it, you'll never stop

Readability Plus (one disk)

Author: Scandinavian PC Systems

Registration: \$25

Performance: 8/10

Ease of Use: 9/10

Don't confuse Readability Plus with grammar and style checkers. It starts where those programs leave off. In fact, most users have a fine command of the English language and don't need grammar checkers.

Grammar checkers correct many grammar and word usage errors. And they'll let you stipulate how strict you want those grammar rules applied through the selection of what they call business, technical and personal "styles". But their definition of style applies to word usage, not writing rhythm and word and sentence cadence.

In contrast, Readability Plus assumes that what you've written is mechanically correct. Rather than look for errors, it looks for sentences and words that aren't appropriate for your intended audience and purpose - those things that make writing boring and unintelligible to the reader. Compare your text with any of the nine writing style models provided with the program. 'Align' the style of your draft with the model's so that they're indistinguishable.

Whether you want to write love letters that read like advertising copy (not such a daft idea!), or technical papers that read like well-crafted magazine articles, Readability Plus gives you the writing edge that only other Readability Plus users enjoy!

Readability Plus really works!

It produces graphical and statistical analysis of any passage which can be tested under a wide variety of categories - newspaper, technical, magazine article, novel etc.

automatic computation of Easter and lunar cycles, mouse support, optional Julian dates, automatic event repetition. Calendars are printed in English, French, German or Spanish.

DESK TOP PUBLISHING

Print Partner

(one disk)

Author: Robert

Bequette

Registration: \$20

Performance: 9/10

Ease of Use: 9/10

Print Partner is three programs in one, each fully menu-controlled and very easy to operate. It produces printed banners, signs, and calendars for any year/month. You can also save and reload any of your compositions for later use.

First, Banner prints text of your choice on a roll of paper with

letters about six inches high. You can have a graphic on either end and use any font you require. Print Partner attempts to smooth the text and graphics to make them look better.

Next, Sign, usually the most popular function, produces an A4 sheet containing lines of text each of which can be printed again with your choice of font. Signs may have any number of two different graphics you select and may be placed anywhere on the page.

Third, Calendar, prints an A4 size desk top or wall-mounted monthly calendar with a box for each day to fill in manually as required, for any month from 1980 to 2098, with the month name in any font you select. Print Partner can be configured for most printers and comes with a varied interesting set of fonts.

Mossburn Clip Art Collection

(one disc per title)

Author: Mossburn

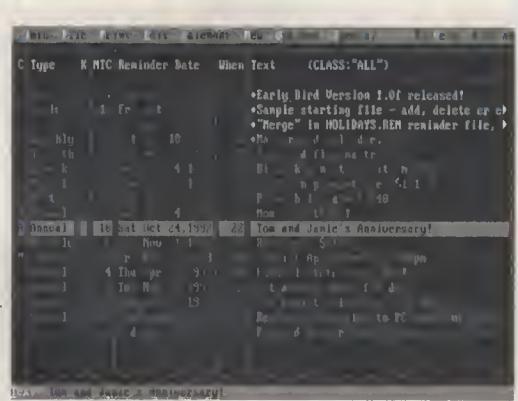
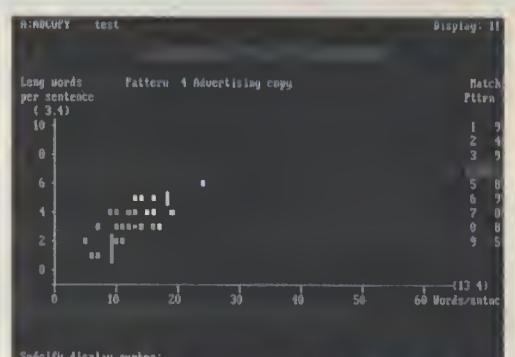
Graphics

Registration: £12 per title

Performance: 9/10

Ease of Use: 9/10

This UK author has created a large collection of high quality line and continuous



tone drawings of celebrities, great statesmen, animals, cartoon characters and artists. The drawings, by a variety of new artists are presented in sets of up to 5 disks in 3.5" media (720k) or 10 disks of 5.25" (360k). They are available in GEM (for Ventura Publisher) and in TIFF and in PCX formats for all other DTP routines. Sets cost the same price whatever the format or media.

The authors state that the collection, will be continually updated and extended. Many artists are already working on new titles. Their work will include great painters, writers, composers, poets, film stars, television personalities, world leaders, scientists, comic heroes, explorers, royalty...and so on.

All Mossburn Clip Art Disks, including Ornamental Drop Capitals and Scalefonts are offered free of copyright, which means that you may use them freely in publications.

The following clip-art titles are released as shareware (1 disc per title)

- Clipart: Artists writers & composers (TIFF)
- Clipart: Artists writers & composers (PCX)
- Clipart: Animals, cuties & critters (TIFF)
- Clipart: Animals, cuties & critters (PCX)
- Clipart: Film stars (TIFF)
- Clipart: Film stars (PCX)
- Clipart: Great statesmen (TIFF)

All Mossburn Clip Art disks, including ornamental drop capitals and scalefonts are offered free of copyright, which means that you may use them freely in publications.

(Please specify GEM, TIFF or PCX format when ordering shareware)

DRAWING AND PAINTING

Desktop Paint 256 1.4

Author: Steve Rimmer
Registration: \$35.00

Performance: 9/10

Ease of Use: 7/10

Desktop Paint 256 is a full colour bitmapped paint program written to use the extended resolution of super VGA cards. It features a mouse driven user interface, full colour manipulation and draw-

ing tools and a choice of popular image file formats. Desktop Paint 256 supports the following image file formats:

- PCX (as used by ZSoft's PC Paintbrush)
- GIF (as used by CompuServe)
- IFF/LBM (as used by Electronic Arts' Deluxe Paint)
- TIFF

Desktop Paint 256 will work with image files having between two and 256 colours. However, if you're working with two colour...

monochrome... graphics, you'll find that our monochrome Desktop Paint package is better for handling them. It's faster, requires much less memory and has tools designed for monochrome applications. Desktop Paint 256 is a paint program, rather than a drawing program. It does not support GEM, Corel Draw, Designer, DXF or EPS files.

Unlike many other paint programs, Desktop Paint 256 features complete EMS and XMS support. It will handle enormous images... pictures which unpack into several megabytes... if you have sufficient expanded or extended memory in your system. Note that you must have at least 300 kilobytes of EMS or XMS to edit a 640 by 480 pixel picture under Desktop Paint 256.

You can theoretically run Desktop Paint 256 on an 8088 based system, although it will be very slow and cumbersome.

We recommend at least an 80286 system. An 80386 system will improve its performance considerably. Desktop Paint 256 requires a Microsoft compatible mouse and VGA driver. If you've got the kit — this is a great package. For those who do not have VGA we recommend the EGA version which is also available as shareware.

HOME FINANCE

Page Cheque Book (one disk)

Author: Gary Finlay
Registration: Not Specified

Performance: 8/10

Ease of Use: 8/10

At last someone has developed a practical system for UK users to manage financial transactions with ease and accuracy. Page Cheque Book will track your bank, credit card, building society and savings accounts online. Page Cheque Book will:

- remember all of your regular payments and receipts.
- remind you when recurring entries are due to be posted.
- accept your adhoc payments and receipts.
- reconcile your statements simply and quickly.
- analyse your account in detail.

• save you time and might save you bank charges.

You can tell Page Cheque Book about any 'standing orders' you have. An order is any regular payment or receipt, eg magazine subscription, the monthly mortgage or your salary cheque. Once told, Page Cheque Book never forgets to remind you to 'post' the order on the correct date. If you attempt to 'post' it too early, you will be alerted to that fact. You can tell Page Cheque Book about your adhoc payments and receipts, e.g. cheques written, bank charges, interest charged and received. When a statement is received you can 'reconcile' Page Cheque Book's transactions against it.

Home Accounts (one disk)

Author: Blackwood Software UK

Registration: £10

Performance: 8/10

Ease of Use: 8/10

How many times have you received your monthly statement from the bank, showing a final balance of lots of money, only to find that the last half dozen cheques you wrote out have not been cashed yet? Here's a solution to end this confusion for once and for all.

With Home Accounts you can keep an up to date record of

EGA Colouring Book (two disks)

Author: Kinderware

Registration: £20

Performance: 8/10

Ease of Use: 9/10

All children enjoy colouring in pictures. You can now avoid all the mess of paint pots, water and dirty brushes by using the modern hi-tech method of your PC running this neat program.

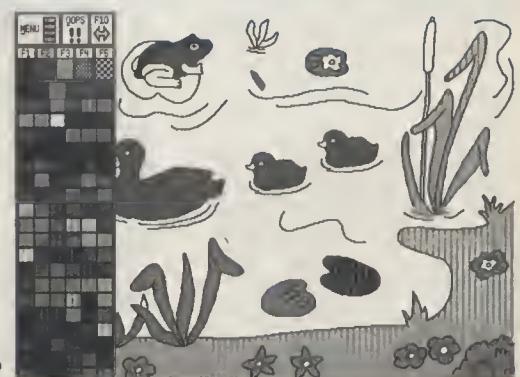
EGA Colouring Book (ECB) allows children to use over 500 colours and patterns to colour full screen pictures. A selection of five pictures is supplied with the shareware version — more when you register.

Children will enjoy bringing the pictures to life with colour. ECB teaches eye-hand co-ordination and encourages artistic expression. ECB is very easy to use and is suitable for children as young as 3 years — there is no need to be able to read. The only problem reported is that children have difficulty getting the parents and grandparents to stop using ECB.

Most of the common commands have picture icons which can be easily identified. EGA Colouring Book is a great program to use to introduce the computer to children. They will have so much fun, they won't even realize that they are learning basic computer skills.

ECB runs in the EGA high resolution (640 x 350) 16 colour mode to provide beautifully detailed pictures and hundreds of vivid colours (produced by mixing the 16 screen colours).

EGA Colouring Book will provide many happy hours of entertainment for the entire family.



your account(s). You can enter all your Standing Orders and Transfer them to your monthly account when due.

At the end of each month, the final balance can be carried forward as the starting balance for the next month. A full breakdown of your monthly expenditure is available at the press of a key.

The program also includes Loan Calculator which works out the total interest on a given amount, and will display the monthly and weekly payments required to pay the loan in the given time.

The third feature in this program is Mailing List. All you have to do is enter the Names and Addresses into the database.

When you want to print out a Name and Address, just select the Name you wish to print, enter the size of envelope you are using and the program will do the rest. Your Name and Address will be centred on the envelope.

Checkmate Plus (two disks)

Author: Custom

Technologies

Registration: \$15.00

Performance: 8/10

Ease of Use: 7/10

One of the most popular uses of a home computer is in the control and monitoring of domestic finances. These can range from a straightforward 12 month breakdown of incoming and out going monies through to a mini-accounts package offering detailed analyses and reports.

Checkmate Plus falls more in the latter category, however. It is sufficiently well-presented and well-documented to be used in any simpler application. You don't have to make use of the more advanced features initially or at all. The strength is that the more powerful features are there to be used as you gain confidence and explore the potential of the program.

CheckMate Plus is a full-featured, easy to use, cheque book-based accounting package. It is a real accounting package, with real double-entry transactions. You can produce true balance sheets and income statements as well as numerous budgeting and graphical reports.

CheckMate Plus is intuitive,

easy to use, and has extensive on-line help. To use the more sophisticated features you will need the user's guide to fully exploit its power. It comes with a disk-based introductory user's guide to aid you in evaluation. This is quite large.

Household Register (one disk)

Registration: \$34.95

Performance: 7/10

Ease of Use: 8/10

Most people have no real idea of the value of their possessions. Whilst this may not be important most of the time, should a disaster strike and they need to fill in a wad of forms for their insurance claim, it can often be difficult to persuade the insurance company of the full value of your things.

So, before a problem occurs it is wise to take an inventory, itemising all your goods and chattels and attaching their value. What better way to do this than on your PC?

Household Register is a fully equipped database system specifically tailored to log all your household possessions with their corresponding values, analyse the data and produce valuation reports and statistics.

You can use the reports to initiate your insurance assessment and present it to the insurance company along with any claims you may need to make.

HOME MANAGEMENT

Collect! (1 disk)

Author: G L Alston

Registration: \$25

Performance: 8/10

Ease of Use: 8/10

A collector's program should be a tool. Not just one to record stuff on a computer disk instead of paper, but one that can analyse and manipulate the information. Many programs, for instance, allow you to enter the price you paid for such and such an object, but offer very little manipulation. You are not really doing anything that cannot be done with a notebook.

Collect! is an advanced specialty database that is used to keep track of the things people collect. It can also be used by small dealers. It will

also serve to keep track of household inventory.

Collect! offers unique features that make this collector's database faster and easier to use than any other product:-

- * Common spelling file
- * Works in RAM memory, not the disk

- * All data on one screen
- * User changeable database templates
- * Mouse Support
- * Financial data
- * Masked printing

Collect! is not as cryptic as some database products can be. Rather than using the standard menu system (Add, Change, Delete, etc.), Collect! uses pop-up windows and a mouse and is laid out to be easily understood.

GENEALOGY

Trees II (one disk)

Author: Tomorrow's Designs

Registration: £49.95

Performance: 8/10

Ease of Use: 8/10

In some families, there already exists a wealth of information, stored in various forms, just waiting to be ordered and examined. In others, records are patchy. Tracing further into the past involves careful investigation, following clues, hunting through public records for new leads.

The science and art of investigations, (and it has all the attributes of both), is genealogy. Investigating your heritage produces vast amounts of data, and the genealogist must find ways of recording it, then correlating it to discover the stories that lies behind it.

Trees has been designed to aid the genealogist so as to make his or her job as simple and as fun as possible. While requiring no great specialist knowledge about either computing or genealogy, it nevertheless has all the power and scope of other fully professional genealogical software.

We are all proud possessors of a heritage that goes back to the dawn of recorded time and beyond.

Our ancestors have many tales to tell, can we but find them. And having found them, what better way to manage the information than with your PC?

Brother's Keeper (three disks)

Author: John Steed

Registration: \$40

Performance: 9/10

Ease of Use: 8/10

Brother's Keeper is a set of programs which will help you organise your family tree information, and which will print the information in several ways.

You will be able to print descendant charts which show how anyone named in your file is related to everyone else. You may also print ancestor charts, family group sheets, alphabetically-ordered name lists, descendant trees, lists of birthdays, and customised reports.

For each person entered in the file you may include a date of birth, a date of death, and three other significant dates and you may store a place of birth, a place of death, and a place for three other noteworthy events. You also may enter two additional fields for any other events or information you feel is relevant, the subject matter for which you may define.

Each person can have up to seven message lines of additional data, or a text file of unlimited size containing notes and addenda. Each person may have up to eight marriages stored (enough, even, for Elizabeth Taylor). Each marriage record can hold a marriage date, a place of marriage and one additional date and place, and can store up to 24 children.

Brother's Keeper is a very comprehensive system which offers all the features required by the average genealogist. It therefore comes highly recommended.

PUZZLE CORNER

Cipher

Author: Nels Anderson

Registration: \$15

Performance: 7/10

Ease of Use: 8/10

Monitor Type:

**VGA/EGA/text mode
(colour or mono);
best on VGA/EGA**

Mouse: Yes (optional;
VGA/EGA modes
only)

X-Word Wright (one disk)

Author: Peter Milne
Registration: £15
Performance: 7/10

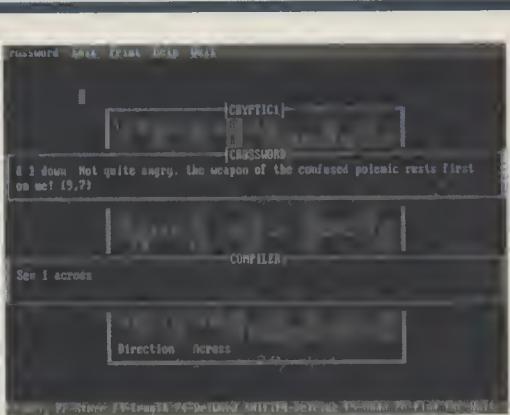
Ease of Use: 8/10

Here is a great way to produce your own customised crossword puzzles, quickly and accurately. You can use ready-made shells or design your own.

Registered users benefit from a word search utility giving the ability to search puzzles for words that will fit in the spaces in the grid. Can get you out of some nasty corners.

You also get the ability to search dictionary files for words that will fit in the spaces in the grid and the ability to search puzzles for clues that match words in the grid. Can save a lot of typing, but also allows you to review treatments that you have used before and modify them, or choose another. And if you're stuck for time, it's a must!

Sample puzzles are provided and these can be printed out on any standard printer. In addition to your own amusement, this program is ideal for filling up the pages of your local newsletter, club magazine or for keeping the youngsters entertained on a rainy afternoon.



Cipher is a crypto-quotes type game, updated to support hi-res EGA and VGA graphics and mouse play. It includes many puzzles to solve plus options such as help, hints, save/restore, etc. You can also create your own puzzle files. All game play can be done with a mouse or with the keyboard according to the players preferences.

The objective of Cipher is to solve a word puzzle. You must try to discover the real meaning of a quotation or other phrase that has been encrypted.

Also available from the same author - Cipher for Windows. Just like regular Cipher, only this runs under the Microsoft Windows 3 environment. It includes standard Windows help with complete game instructions.

SPORTS

Pools! (1 disk)

Author: Kerry M Walsh
Registration: £19.95
Performance: N/A

Ease of Use: 8/10

This Football Pools Draw Predictor works by computing a unique weighting factor for each team in the various divisions. This factor is based upon the performance of that team, at home and away, over the most recent 15 weeks. You are required to keep these performance data up to date by entering the number of goals

scored by each team and its opponent weekly. The program automatically calculates all the other data it requires from this input and discards data over 15 weeks old.

To predict the draws for the next week's matches you just enter the team numbers of the opposing teams and the program compares their weighting factors and predicts a result. If the program predicts a drawn game it also displays the 'odds' for that drawn game. Low odds (1:1 is the lowest) indicates that the two teams' weighting factors are very close. Higher odds indicate increasingly less likely draws. This is useful if the program predicts more draws than you require for your particular pools entry. Just discard the higher odds draws until you have the correct number for your perm plan or entry.

The author says "1. I chose to use the previous 15 weeks data in the prediction routine rather than the 'season so far' data because I found from experience that the predictions produced by the program grew less accurate as the season wore on. In other words a team is only considered as good as its last 15 games".

**Golf
Performance
Analysis System
(one disk)**
Author: Q Systems UK
Registration: Fee
optional

Performance: 9/10

Ease of Use: 8/10

This unique computer system will not cure your slice, hook, shank or yips — for that you need the advice of your PGA professional! However, by identifying, and more importantly quantifying, key strengths and weaknesses any serious golfer can learn to overcome their real handicap — inadequate course strategy. Simply recording a few details for each hole played produces 1000's of useful statistics about your game. This fascinating insight into your performance can be used to develop a whole new approach to the Royal & Ancient Art of Golf.

The various functions of the Golf System are selected from menus along the bottom of the screen. To the left of the menu is its title, and the current option on the menu is highlighted.

This program is designed to work with even the most basic PC system and automatically introduces improved features such as graphics, colour, mouse control etc, if the hardware is there to support them.

The whole of the user instruction manual is contained in the File GOLF.HLP and is available on-screen by selecting the ? option at the start of each menu. If help is requested topical information for the current menu will be displayed, and other sections of the user manual can be accessed by selecting an option from the help menu.

The evaluation edition of the Golf system is distributed with three sample data files containing records for courses, players and scores. This will enable you to evaluate the features of the system.

Owzat!

(two discs)

Author: Brian Williams
Registration: £35

Performance: 8/10

Ease of Use: 9/10

Hard disk required

A comprehensive cricket scoring and statistic generating program designed to provide detailed and accurate analyses of match results, Club and Players' averages etc. both on screen and printed, with the minimum amount of data input.

A wide variety of reports, aggregates and statistics can be generated, configured by any combination of date, competition and other qualification criteria.

These can then be printed with enhanced titles etc (where a suitable printer is employed) making them highly suitable for club notice boards etc.

The program takes you intelligently through all of the data entry stages, in a format consistent with popular cricket score books, basing input upon the amount of information you wish to record.

Useful features include facilities to allow the generation and maintenance of a squad of regular players to reduce the amount of keyboard input. In addition a file of up to 50 Leagues and 50 Cup competitions can be held, allowing selective reports to be generated.

These features not only keep typing effort to a minimum, but also help to maintain a consistency of quality in printed reports and reduce the likelihood of data entry errors. Screen colours are coded to their respective menus. This helps keep the user always aware of his position in the program structure.

The program provides information and instruction in a consistent format throughout. Windows pop up to provide information, such as the squad table or a list of previously played matches. A red message line provides options,

instructions and messages at various stages throughout the program. If you make an incorrect selection from a menu, you have the opportunity to escape back to menu by pressing the ESC key.

FOOD AND DRINK

Edna's Cook Book (one disk)

Author: Specialty Microware
Registration: \$29
Performance: 7/10
Ease of Use: 8/10

Edna's Cook Book is for recording, filing, listing, and printing recipes. Essentially, it is the equivalent of the cookbook in which you now keep all your recipes, except that it is electronic.

The program may also be used in the preparation of cook books for publication, since it facilitates organisation and printing.

If you can type, you no longer have to deal with disorganised slips of paper and clippings thrown together in a drawer or box, only to be frustrated when you can't find that particular recipe that you remember you had, except you can't remember where it is, or what the precise name of it is.

Edna's Cook Book will take care of the tedious part, so you can get on with the real work. Good cooking.

The only thing we are not told is who Edna is!

Kim's Kitchen (two disks)

Author: N/A
Registration: N/A
Performance: 8/10
Ease of Use: 8/10

Kim's Kitchen is more than a recipe management system. It features a fully operational database system of items and recipes from which the user can create menus, shopping lists and stock control management.

It is a useful tool for both the home cook and professional restaurateur and eliminates much of the drudgery in maintaining stock levels and creating shopping lists (or purchase orders).

The program contains an alarm, a note pad, a calculator,

a conversion table and context sensitive help, all accessible by function keys.

Recipes are a set of quantities of items with instructions. Menu plans are a set of recipes and items, while your shopping lists can be created from either items, recipes, menu plans, stock levels or any mixture of the above.

There is a very comprehensive set of report handling features to complement the functionality of Kim's Kitchen. Supplied with the software are example databases and indexes.

LIFESTYLE

Wedding Organiser (1 disk)

Author: Chris Irwin
Registration: \$20
Performance: 7/10
Ease of Use: 9/10

The Wedding Season is now upon us and this disc is bound to have something useful on it — it comprises a comprehensive invitation Manager, a Budgeting Spreadsheet, a To Do List, a Vendor Notebook and even a series of Sex Lessons (!). All fully menu-driven. The Invitation Manager automatically sorts guest lists alphabetically, tallies RSVP's, tracks gifts and thank you's and sorts and prints guest lists. The Budgeting Spreadsheet lets you create a budget, with up to 45 expense categories, compare actual costs vs. budget, keep track of who paid and print it all out.

The To-do List is preset with all standard wedding tasks which you can edit to create your own version.

The Vendor Notebook keeps track of all the vendors (florists, caterers, etc.) that will be involved in your wedding. And finally, for those who want to know more about the birds and the bees there are some sex lessons included.

FIRST STEPS

Sarah and Katie's First Disk

Author: Meg Noah
Registration: \$15
Performance: 8/10

Ease of Use: 9/10
Requires a colour monitor (VGA, EGA, or CGA)

There are many software packages for children ages three or four, but SarahWare is specifically aimed at infants and toddlers. It is not intended as educational but more as a stimulation by allowing them to interactively select colours and designs which fill the screen in an animated way.

Infants quickly become fascinated by the quickly changing bright pictures. Those as young as three months old will learn to press the keys to change the design. By five months, two-fisted banging begins but can be controlled by parents encouragement. By nine months the baby will have learned that certain function keys play music and have favourite letter keys.

Katie's Clock is designed to help youngsters tell the time. It operates in five time modes: normal, random, sequential, input, and digital. All times are clearly displayed on a colourful, easy to read clock face.

Options are to type in the displayed time or, conversely, set the hands of the clock to match the time stated. Good use is made of the graphics display and colours to stimulate interest.

Wunderbook (one disk)

Author: Hung Fam Li
Registration: \$10
Performance: 8/10
Ease of Use: 9/10

There is something for all youngsters in this selection for 3-10 year olds. Each game is fun but contains a strong educational element too. Each of the five topics uses simple symbol-type menus which are selected from the keyboard or using a mouse.

Whilst the disc contains six basic topics, additional ones can be added at a later date as the child progresses.

The topics covered are objects, numbers, alphabets, words, shapes and language of different cultures. The latter may also be of interest to adults.

Each program is designed to stimulate children's memory, perception pattern recognition and language manipulation whilst also encouraging the

child to explore and play.

Parents can also track their child's progress using scoring tables built into the program.

Animated Alphabet (four disks)

Author: Tom Guthrey
Registration: \$8
Performance: 8/10
Ease of Use: 9/10

Requires EGA/VGA and Hard Disk.

The authors have decided to make full use of graphic animation techniques to teach youngsters their alphabet. The correct answer is rewarded with a variety of clever little animated sequences.

Each letter of the alphabet is displayed on the screen and, when the child presses the corresponding key a picture of an everyday object is displayed whose name begins with the letter selected.

Each picture then undergoes a clever animated sequence lasting for about 15 to 30 seconds eg A for Acorn shows a falling acorn which then grows into an oak tree which then sheds an acorn which falls and grows into a tree and so on ...

The registration copy is personalised with your child's own name which is used during the program's operation. It also includes an extra program called ABC Song.

EARLY LEARNING

Fun with Maths (1 disk)

Author: Paul T Dawson
Registration: None
Performance: 8/10
Ease of Use: 9/10

Requires at least CGA

At the outset, there is no attempt to hide the fact that these programs look like and play like arcade games. So it is likely that children will want to get stuck in to playing them. The subtle part is that they will be learning elements of arithmetic at the same time.

The games are all classic favourites including Space Invaders, a ladders and

platforms game like Donkey Kong and a Hungry Snake game. They all offer a choice of four skill levels and, in order to score points, the player has to answer a series of arithmetic

problems. All four basic function — addition, subtraction, multiplication and division — are exercised. The concept and overall presentation of this program is good and it will appeal to parents and children alike.

Fun with Letters & Words (one disk)

Author: Frank Holmes

Registration: \$15

Performance: 8/10

Ease of Use: 9/10

Developed specifically for the authors daughter to satisfy her curiosity about the alphabet Fun With Letters & Words has now grown into a multi-level reading program. The development has been done in conjunction with reading specialists and parents. The authors have also picked up ideas watching other children use the program to ensure that it provides a good balance between play and educational activity.

The program offers plenty of on-screen help for both the child and parent. All levels are menu-selected. To get the best out of the program we recommend activities are done together.

A good introduction to the subject which has obviously had a lot of thought put into it.

Fun with Designs (one disk)

Author: Frank Holmes

Registration: \$15

Performance: 8/10

Ease of Use: 9/10

Fun With Designs introduces the concept of simple geometric shapes and pattern recognition to youngsters (suggested age range 4-9). It runs in either CGA or EGA mode depending what is available and, of course, offers a wider range of colours and better graphics on EGA.

Selection of shapes and colours is all straight from the screen using symbols and not words. Control is via the cursor key pad and lettered keys.

Picture elements can be moved around, erased, added and coloured. Facilities are provided for saving and loading part finished or completed creations.

LANGUAGES

Macbeth Tutor (two disks)

Author: Steve Herbert

Registration: Apply

Performance: 7/10

Ease of Use: 9/10

Macbeth is one of Shakespeare's most powerful tragedies, and its elements of ambition, witchcraft and murder make any performance of it memorable. Just reading the play from a textbook can make it dry and lifeless so, this author has devised a neat computer program to make study more interesting.

The program consists of a series of activities to assist secondary school students learning the play part of their English literature studies. The student can select the activity of his choice from a series of menus. Activities include several quizzes or games, notes on a wide variety of topics, graphics of the Globe Theatre and even a competition with the chance to win worthwhile prizes. The games are designed to be fun and at the same time to provide a fairly painless way to memorise quotations, learn important speeches, and in general, to become familiar with the plot, characters and themes of the play.

GCSE French (two disks)

Author: Mike

Greenwood

Registration: £28.75

Performance: 7/10

Ease of Use: 9/10

Although there are a few French tutorial programs available on the shareware circuit, most of them only cover the basics and are not specifically aimed at students. Now UK author Mike Greenwood has produced a useful new program designed to offer practical help to GCSE French students.

GCSE French offers a range of menu-controlled options for learning the language and testing your knowledge of the language.

The general presentation is good and encourages the user to explore further. GCSE French is suitable for age 10 upwards.

A good revision aid but note that the shareware version restricts the options available in this mode. The full version has already undergone successful trials at a local college.

MATHS

X-YSee EGA

X-YSee VGA (one disk each)

Registration: \$30 each

Performance: 9/10

Ease of Use: 7/10

XYSee supplements secondary school and college level studies in Algebra, Geometry, and Trigonometry.

X-YSee is an interactive, computer-aided-instructional program featuring high resolution colour graphic displays of standard equations. XYSee includes extensive coverage of points, lines, conic sections, trigonometry, parametrics, composites, and artistic mathematics. The adaptive power of this unique, menu driven program is enhanced through the use of macros to illustrate mathematical principles and implement fully automated testing.

XYSee's game module challenges the student to solve puzzles with complexities. The goal is to duplicate the form, position, and orientation of functions by selecting proper variable values. Special help is available for identifying boundaries and zeroing in on solutions. A performance reporting module continuously tracks solution attempts and the difficulty level attained. A version of X-Y See is also available for Hercules/CGA users (2 disks)

Learning Maths (one disk)

Author: Robert J. Farrell

Registration: \$9.00

Performance: 8/10

Ease of Use: 9/10

How does a busy parent get his/her child to sit down and work out thirty or forty arithmetic problems without resenting the "punishment"? How can a busy parent cope with checking the answers and monitoring the performance?

The "Wizard" offers the solution to this dilemma. It is a comprehensive, competitive exerciser for arithmetic. It lets child and parent work together. Parents don't have to waste time making up problems or correcting right answers. The Wizard takes care of that. And after each 10 problem game he calculates the new average, checks the score against the best ever and the player's own previous best performance, announces the score, and celebrates the player's progress.

The program provides randomly generated, graded problems that cover a wide selection of the elementary school mathematics curriculum. Each type of problem has 10 levels. Each level has a target score. A score is determined both from the number of errors and the time it takes to solve 10 problems.

Since the Wizard asks for and remembers a player's age, it can and does restrict access to easier problems by age.

From age 13 up, Learning Maths presents the option of playing with negative numbers. Any level from 5 up of any type of problem may be played at any age level when using negative numbers.

Disc also includes Funnels & Buckets and the Times Tables

HUMANITIES

The World About Us (one disk)

Author: Hinh Van

Nguyen

Registration: \$15.00

Performance: 9/10

Ease Of Use: 8/10

Requires CGA, EGA, or VGA board and a compatible monitor

World Info is not only a useful aid to geography students but also makes an interesting way of finding out more about the world and testing the family's knowledge of countries, capitals and rivers. Of course with recent events some changes are inevitable but this is true of any World atlas.

The program displays on the screen a map of the entire world or part selected from the menu — Africa, America, Asia, Australia, Europe. You then have the options of country names,

capital names, information by country, information by capital or information by maps.

The first two of these will ask you the name of the Country or Capital highlight on screen according to the continent you preferred before. The second two will wait for you to type the Country or the capital. After you ENTER, the computer will try to Match your input of the Country or the Capital and display the country name, the capital, population, population/square mile, largest city, area (square miles), languages and religions.

Option 6 has a circle on the screen and waits for you to move. You can use arrow keys or Home, PgUp, End, and Pg Dn keys to move the circle. Press Enter will let you know the Country and Capital names.

Other options available include the 12 Longest Rivers in the World, the 12 highest Mountains, the 12 largest Lakes and Seas.

Historical Calendar (one disk)

Author: Bernd Kratz
Registration: \$10
Performance: 7/10
Ease of Use: 9/10

This disc features The Historical Calendar of Western Europe AD 550 to 1970 (1 to 2700). Users can select from a variety of different calendar systems — Gregorian, Julian, Jewish, Moslem, French Revolutionary, Icelandic and liturgical.

Each calendar may be viewed on-screen or printed out. Each one features special days as appropriate to that particular year. Historical information is included.

The program would be useful top historians and as an aid in education.

SCIENCES

Senior Physics Facts (one disk)

Author: R Lamont
Registration: £10
Performance: 8/10
Ease of Use: 8/10

Senior Physics Facts is a physics tutorial for students of 15+ years of age. The topics covered in the tutorial are:

1. Waves, 2. Sound, 3. Light, 4.

Mechanics, 5. Heat and temperature, 6. Electrostatics, 7. Current electricity, 8. Magnetism, 9. Atomic physics, 10. Electronics, 11. Nuclear physics.

The tutorial features interesting historical facts about many famous physicists. It is built on a hypertext system ie there are multiple levels of descriptive text "below" each key word in the text.

The tutorial makes an excellent learning and revision aid for second year students. It can be operated by either the keyboard or mouse.

Cell Biology (one disk)

Author: Leonard Ginsberg
Registration: \$20
Performance: 8/10
Ease of Use: 8/10
Requires EGA or VGA card and a mouse.

The subject of Cell Biology, particularly DNA synthesis, lends itself well to being taught on a computer as a picture displayed at the right time can explain a point far more readily than dry text.

This program is intended to help students assess their level of knowledge and review the basic concepts in the subject area. It is not intended to replace lectures or the reading of the text.

The program was designed to

allow students to move through this difficult material at their own pace.

Cell Biology uses a PC tutorial System called U-Tutor and this has been applied to a number of other tutorials.

The system makes learning more interesting by combining text and graphics plus a series of question and answer routines to get you on to the next topic.

The author is a college lecturer and so is well acquainted with the needs of students. The complete Cell biology Program is available to registered users (four tutorials in all).

word is entered and the search initiated. Findex will then find the first occurrence of the word and you can ask it to continue finding it until it reaches the end.

Often you will wish to look at verses surrounding the one that is selected. The power of SamFindex really becomes apparent when searching for a verse using a more complex pattern.

SamFindex is designed to run on PC's and complete compatibles with Mono, CGA, EGA, VGA or Hercules display adapters. By default it writes to the screen in a way which is very quick but relies heavily on the memory layout of the PC.

MUSIC

Musician's Toolbox (one disk)

Author: D T Richards
Registration: £10
Performance: 8/10
Ease of Use: 9/10
Requires EGA or VGA

The Musician's Toolbox combines these functions:

The Chord Analyser provides the musical spelling of the chord symbol printed on most sheet music. The relevant notes are sounded and displayed graphically on a simulated keyboard. Accepts a variety of styles of chord symbols and no difficulty should be

Melissa's Music Flashcards (one disk)

Author: Roger A Johnston
Registration: £15
Performance: 8/10
Ease of Use: 8/10
Requires EGA and mouse

In watching children try to learn the notes and keys of the music staff for piano lessons, the use of old-fashioned flashcards was boring to them (and the adults). This program was written with those flashcards in mind.

An interactive computer environment would be both entertaining and interesting. The use of this program probably requires some knowledge of music, such as what a note is, what sharps and flats do, the difference between treble and bass clefs, etc.

However, when this program is used in the context of learning a musical instrument, the theory should pose no problem. Fundamentally, this program allows one to choose the clef and the number of sharp or flats in the key signature after which key signatures and notes are displayed at random on the staff. You can guess at the note or have it displayed as a key on the keyboard. Animating the notes adds interest to the process of learning the names of the notes and keys. You can either supervise the student along with the program or let them practice at the student's own pace.

A useful aid to learning the principles of musical notation.



experienced on this account. **Guitar Chord Dictionary.** By pressing the space bar after using the keyboard Chord Analyser, a graphical display of the equivalent chord shape for guitar may be obtained. Three alternative possibilities are given which may vary in suitability depending on the current playing position on the guitar neck, the degree of proficiency of the player, etc.

Ear Training. Most musicians are aware of the importance of ear training (particularly in improvised music). This is also a requirement in the examinations of the Associated Board of the Royal Schools of Music and similar bodies. This module plays random intervals and requires the student to select the appropriate description.

Metronome provides a usable metronome, supporting all practical tempos and any time signature in either simple or compound time. The audio output is accompanied by a matching visual display.

Transposer provides an instant reference for transposition of notes between any two keys. As the transposition is shown for the entire chromatic scale (so allowing for the inclusion of accidentals) it is irrelevant whether the key is major or minor. For this reason, only the tonic note of the key should be entered (e.g. "G" rather than "Gminor" or "Gm").

Instrument Information provides details of the range and usability of all the most common instruments of the orchestra. This information is indispensable to musicians who wish to arrange for ensembles of instruments with which they may not be wholly familiar.

UTILITIES

Essential Utilities

(one disk)
Author: Various
Registration: Mostly Public Domain

Performance: N/A
Ease of Use: N/A

As the name implies, this collection of utilities is an essential addition to anyone's collection. Out of the 50 programs crammed on to the disc there have got to be at least two or three which are worth the price of the disc alone. Highlights include the

Dress Me Up

(one disk)

Author: Christopher Gunn

Registration: \$35

Performance: 7/10

Ease of Use: 8/10

Requires EGA or VGA Mouse

recommended

Dress Me Up is an imaginative paper doll game with a rather endearing collection of animals to dress up.

A girl and a boy may be picked from any of the four kinds of stuffed animals on the shelf to play with. The idea is to select a range of clothing to dress the doll up in.

There are blouses, skirts, slacks, hose, purses, jackets, shoes, hats, coats, shirts, sweaters and socks hidden behind the cabinet doors to choose from.

Dress Me Up comes with two complete outfits for the girl and boy animals and eight more outfits can be added to their wardrobes.

In addition to all the different clothes, a water colour box will appear on the screen and let the child paint the clothes or the animals themselves. The paint box includes polka dots, stripes, and a wild plaid.

Dress Me Up quietly enhances neatness, memory and word skills and is suited to the 3-10 age range. Using a mouse is an automatic option.



Command Line Editor which replaces the extremely limited Function key F3 repeat last command with a full "logbook" of all commands entered since the machine was switched on. These are accessed by simply operating the cursor up/down keys -great for repetitive work. CWEEP is a great enhancement to the standard directory command. Each file on the disc is presented individually and you can view, print, rename, delete, copy, change status etc at the touch of a key. A powerful tagging system enables you to do operations on groups of files at the same time.

Other utilities include Sorted Directory, Disc Catalog, Clock, Clockfix, Alarm, Cover, CPU, DVShell, HOTDOS, Partner, Hyde/Unhyde, MDSecret, CDSecret, RDSecret, FDate, RenDir, Tree, Treecopy, Treedir, Undelete, Whereis, Lock/Unlock, Lockit, NO, Cursor, Nocursor, Normcursor, RAMFree, Vprint, Readonly/ReadWrite, Park, Timepark, Slow, CGA Emulator, etc.

CHILDREN'S GAMES

Pallanda

(one disk)

Author: ShareGames

Registration: \$15

Performance: 7/10

Ease of Use: 8/10

Requires EGA or VGA.

Mouse recommended.

This is a fun game for youngsters age between five and 10 but it offers enough strategy and luck to make it challenging for Mum and Dad too.

Prince Pallanda can be included as one of the four players. The name, Pallanda, comes from 'Pal Land' where everyone plays happily together and King Pallanda makes sure everyone plays fair.

The object of the game is to land on the gold circle in the centre by moving to the closest colour shown on the spinner. There are hidden surprises everywhere along the way with pictures you can watch being drawn. It sounds simple. However, the nearest matching colour is often in the wrong direction!

Pallanda is designed so even youngsters that aren't reading yet can learn to play well. Finding the closest colour enhances counting skills. Learning the easy way.

ARCADE GAMES

Monuments of Mars

(one disk)

Author: Apogee

Registration: £29.95

Performance: 8/10

Ease Of Use: 8/10

Requires CGA, EGA or VGA

In the game, NASA has sent several manned missions to explore the mysterious monuments but every one has ended in disaster. Soon after the astronauts landed on Mars NASA lost contact with them and no one knows why.

You're the last hope. You have been chosen for a special mission to rescue the missing astronauts and to discover the secrets of the Martian monuments. The game begins just after your ship lands on Mars near the site of one of the many monuments.

This is an arcade/adventure game set in the near future in which you explore a secret underground city on Mars. In the first volume (First Contact) you need to survive 20 unique and challenging levels/screens filled with puzzles, traps, creatures and useful artefacts.

This game features great graphics and sound effects, plus a compelling and fascinating story. Features include save/restore, high score chart, sound on/off and keyboard configuration. This is the first game to give you unlimited lives! You never see a "Game Over" message in The Monuments of Mars! you just restart the level whenever you die so you can focus on solving each level without the hassles of constantly saving and restoring your game.

Moraff's Superblast

Captain Comic

(one disk)

Author: Michael A. Denio

Registration: \$10

Performance: 9/10

Ease Of Use: 8/10

Requires EGA

You are Captain Comic, galactic hero.

Your mission is to recover three treasures from the planet Omsoc, which have been stolen away and hidden somewhere on the remote planet of Tambi.

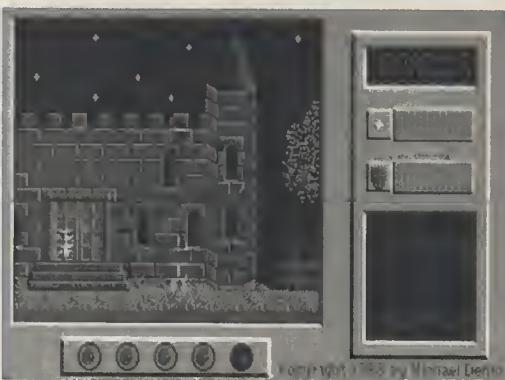
Your task will not be easy, you will need to gather tools to increase your fighting and defensive capability, navigate dangerous terrain, and avoid or destroy a hoard of deadly creatures. It will take all of the Captain's skill and wit to see the treasures returned to Omsoc.

The Captain Comic character displayed on the screen is controlled from the keyboard using the cursor control keys. The Space Bar makes him jump and, once he has collected his first can of BLASTOLA COLA the Insert key makes him fire.

When COMIC has possession of the DOOR KEY, this key is used to open doors. To open a door and pass through, position COMIC in front of the door and press Alt. The door will slide open and COMIC will disappear, finding himself elsewhere.

When COMIC has possession of the WAND, this key is used to teleport to another place on the screen. Press Caps Lock and COMIC disappears in a cloud of smoke, and reappears in a new place on the screen. The teleportation is not random, and when used properly, can allow COMIC to reach places on the screen that are normally inaccessible.

COMIC starts the game with 5 lives, and no objects in his inventory. The game will end after COMIC retrieves all three treasures or when all spare lives are exhausted. The treasures include rare gems, a sack of rare coins and a jewelled crown.



(one disk)

Author: Moraffware

Registration: £35 for complete set of games

Performance: 8/10

Ease Of Use: 9/10

There have been many games based on the original Breakout theme where your task is to bounce a ball at a wall using a simple paddle, chipping away at the bricks until you get to the other side - but none of them is in the same class as Moraff's Superblast.

This one has so many new features that it brings a whole new life to the theme. The action is fast but not so fast that the game is unplayable (and it can be adjusted) but interest is sustained by the fact that each time a screen is completed a totally new and very different one comes up.

The variety of objects is also quite wide, some break up, some explode into a myriad of more balls, some bounce off, some make your paddle bigger, others make it smaller, others are one-way only.

The program has been cleverly designed to work on all types of monitors and adjusts the resolution and graphics accordingly. This is the sort of

game you shouldn't start late at night or you'll be going to bed in the small hours!

EGA/VGA GAMES

Quattris Pro

(one disk)

Author: Eugene

Ignatius Kim

Registration: \$10

Performance: 7/10

Ease Of Use: 9/10

Requires An EGA/VGA card

This is an extensive and compulsive version of the

now legendary game Tetris, designed specially for PC's with EGA or VGA graphics. You may either move your mouse or use your cursor pad to select a choice in the menu and then play the game. A robot instructs you what to do. For those of you who are unfamiliar with the rules of the game:-

You see four sets of blocks in the top of the window at the beginning of the game. These blocks will slowly fall to the bottom. You can rotate these blocks by pressing Enter. You can also move them Right, Left, and Down by using the cursor pad. However, you can not move them upwards. You can move and rotate the blocks so that you will have no space in between each blocks when they fall to the floor.

The main purpose of this game is to completely fill in one or more rows with these blocks. When you do so the filled line will be removed by the computer giving you more space to fill up. The more times you do this, the higher your score. If you make mistakes and leave "holes" the blocks will fill up to the top of the screen and the game will stop.

Sticky Wicket

(one disk)

Author: Mark Carter

Arctic Explorer

(one disc)

Author: Apogee Software

Registration: £29.95

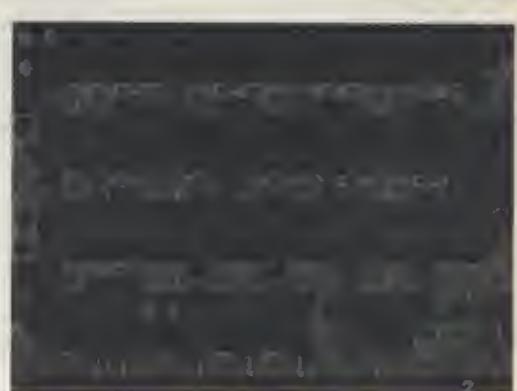
Performance: 9/10

Ease Of Use: 9/10

This is the second exciting adventure of Nevada Smith. Nevada wasn't satisfied with finding the elusive pharaoh's tomb in his first adventure. After months of searching and studying ancient maps, Nevada has stumbled upon the location of a tremendous Viking treasure cave. Join our intrepid hero as he heads for the Arctic in this stunning and chilling new adventure series!

Arctic Adventure contains 80 all-new diabolical levels, packed with mind bending, puzzling arcade action designed to keep you from ever succeeding. Nevada will face freezing waters, diabolical traps, slippery ice patches, falling stalactites, runaway snowballs and even abominable snowmen!

There are many, many more obstacles for Nevada to overcome in this highly adventurous series. You will start on a vast arctic "world" map and must find your way around the hazardous ice caves. You are searching for the remaining fragments of a map that will eventually lead you to the location of the hidden treasure cave. Gather pick axes to break walls and bullets to shoot dangerous enemies, or find the boat to cross the freezing waters to unknown caves. Throughout your adventure you'll also find many bonus items to increase your wealth (and score). It's up to you to learn the use of any object you discover, and whether it should be altogether avoided. This game uses the FAST (Fluid Animation Software Technology) system which allows for flicker free movement even on the older IBM PC's.



Registration: £10
Performance: 9/10
Ease Of Use: 8/10

Requires EGA

Stick Wicket is the ultimate cricket game for the PC. It combines the art of captaincy with week to week action of playing.

Your objective is to win the league and 'Sticky' cup. Your predecessor has left, despondent with the teams poor run of recent results. By selecting the team, choosing field placings, who bowls the crucial overs, where everyone bats and even when a player must run you aim to return the team to its former glory. Your success at doing so will be compared to the greats e.g W.G Grace, M.Bearly in the hall of fame. Hence the term 'Sticky Wicket' hence the situation you face where winning is the difference between glory and failure! The shareware version is limited to 1 LEAGUE season only.

Features include:

- Database of 128 players, 8 teams each with career figures (updated seasonally)
- Ability / Form / Fitness ratings
- Seasonal and Career Averages
- A season of 40-over Sunday League matches including league table, fixture list and full results service every week
- Edited highlights of the game including all the action shots, LBW and other dismissals
- Umpire decisions in response to appeals
- Team selection
- Five different field settings
- Your personal career page

SKILL AND STRATEGY

Seabattle UK
(one disk)

Author: S. Rooney

Registration: N/A

Performance: 8/10

Ease of Use: 8/10

In the period between the early 1900s and just after the Second World War, the battleship was considered to be the capital ship of the world's navies. Starting with the British Dreadnought and culminating in the United States Iowa class of battleships, which were in action in the Gulf albeit using weapons not heard or dreamed of initially.

Seabattle is an historically accurate simulation based on

these famous warships. The objective is for the player of either side to achieve the minimum conditions for victory. Victory is not simply determined by the number and type of ships sunk on both sides. There are four different types of objective a player may be set: 1) Destroy Enemy Naval Forces 2) Move Ships To Objective 3) Deny Enemy Its Objectives 4) Perform Raiding.

Seabattle requires either CGA or EGA/VGA. In its registered form it enables a player to take on the computer or another player whilst in command of up to 20 ships and more than 50 squadrons of aircraft (both carrier and land based)

Megagopoly

(one disk)

Author: Visualk Data Communications

Registration: \$15

Performance: 8/10

Ease Of Use: 8/10

You have just inherited one hundred thousand dollars. Your current employment enables you to save \$5,000 per year. Your challenge is to become financially independent within a twenty year period.

Each year will offer three investment opportunities, a MEGAGRAM, and a summary of current investments. Decisions to buy and sell assets should be based upon economic conditions, risk factors and yield characteristics. All accounts are up-dated at the time of transaction.

Financial independence is measured by the value of net worth. Net worth is the difference between assets and liabilities. Investments can be one of five types: real estate, stocks, bonds, oil, or gas. Each investment has associated risk factors, which weigh the speculative nature of said investment. Megagopoly can be played at many levels. The users' manual provides detailed instructions, investment strategies and a glossary of terms.

Army Manoeuvres

(one disk)

Author: Dwain Goforth

Registration: \$20

Performance: 8/10

Ease Of Use: 7/10

Requires VGA and a mouse and 286 or better

Army Manoeuvres is an interesting blend of Risk and Chess with the added bonus of colourful animated graphics.

The object of the game is to defeat the opposing captain while protecting your captain from attack ("capture the flag"). There are four kinds of pieces, a board with various kinds of terrain and two rafts which can be used to cross the lake. The fundamental gameplay is based on determination of a game strategy then acting out attack and defence using rolls of the (computer) dice to determine the outcome. The game does, however, have a lot of rules — which the computer sees to it are enforced. These rules make the way the game plays out far more interesting and realistic.

Each piece, ranging from Captain, through Artillery, Calvary through to Infantry starts has its own unique characteristics and game rules. These are fully described in the accompanying documentation. The natural features also play a part — water, walls, rafts etc. Army is fun for one player and even better for two. Highly recommended.

GRAPHICS ADVENTURES

Hugo II
WhoDunnit?

(one disk)

Author: David P. Gray

Registration: \$20.00

Performance: 9/10

Ease Of Use: 9/10

Requires EGA and Hard Disk

It's adventure time again as Hugo and Penelope get swept up in another superbly animated 3D EGA extravaganza! This time a murder mystery is afoot with a couple of fiendish twists and a large helping of humour along the way.

Just look what's in store; a revolving bookcase, a saucy French maid, and a murderer! Hugo II, Whodunnit? follows the same look and feel of Hugo's House Of Horrors but with many more screens and characters.

If you enjoyed the original Hugo adventure, Hugo II is a real treat in store for you!

Use simple English to instruct Hugo to perform an action. For example "look around" or "look at door" to look at things. To pick something up try "pick up the gun" or "get gun" or "take gun" etc. Many synonyms are allowed but if Hugo doesn't seem to understand, try rephrasing your command.

Kingdom of Kroz II

(one disk)

Author: Apogee Software

Productions

Registration: £9.95

Performance: 8/10

Ease of Use: 9/10

Kingdom of Kroz II uses high-speed 16-colour text-based graphics and therefore works on all machines. It features a tremendous sound effects library. This shareware game is the first in a series totalling seven different games. The author has adopted an unusual and effective method of registration. Instead of asking for payment for this, the first game in the series, he asks satisfied users to pay for the subsequent games in the series.

You must navigate through dangerous chambers, solving puzzles and avoiding pitfalls. Collect gems, whips, chests, nuggets, tablets, keys and scrolls to aid your progress. This game is as much strategic as it is pure arcade fun.

ZZT

(one disk)

Author: Tim Sweeney & Allen Pilgrim

Registration: £5

Performance: 8/10

Ease Of Use: 8/10

To complete the Town of ZZT, you must master 43 game boards filled with creatures and ingenious puzzles. The game is very challenging and requires a good amount of brain power as well as fast reflexes.

ZZT includes a game editor so you can create your own game worlds using a set of ready made objects. You can also write small programs to control objects using the built in ZZT-OOP programming language. When you discover a new object, try touching it. Nearly everything has some sort of purpose (but watch out for red herrings!).

You can expect to play ZZT a total of about 20 hours before you finish the game. It is well worth the effort and you can always take your journey one step at a time.

ZZT requires a PC compatible computer with at least 512k RAM and any graphics adapter with a colour or monochrome screen. Keyboard, Joystick and Mouse operation are fully supported.

Super ZZT
(one disk)
Author: Tim Sweeney & Allen Pilgrim
Registration: £5
Performance: 9/10
Ease Of Use: 8/10

This is a great sequel to the popular Town Of ZZT game. Journey through the giant seven-level Monster Zoo, shooting monsters and solving puzzles every step of the way! This game boasts an ultra-colourful four-way scrolling playfield and offers hints at the press of a button, plus all of the diabolical tricks that made the original ZZT worthwhile. Super ZZT is a graphics adventure style game similar in style to the famous Kroz series but with a more active playing field and plenty of taxing puzzles.

CLASSIC ADVENTURES
Cliff Diver
(one disk)
Author: Patrick Farley
Registration: \$10
Performance: 8/10
Ease of Use: 8/10

This is the author's first attempt at computerised interactive fiction; an adventure novel entitled, Crime to the Ninth Power. In this game, you'll be introduced to a character named Cliff Diver, a private investigator living and working in San Francisco.

Knowing your way around would certainly be an advantage in playing the game. Cliff may talk about something down by the waterfront, and you may remember driving along the waterfront. But as to going there and trying to find the building Cliff mentioned, I don't think you'll have a lot of luck.

The game is quite challenging but is interspersed with Infocom-style humour which

makes it entertaining too.

For those of you who get stuck easily and hate wasting hours poring over a problem, the author has very sensibly produced a companion "Hints" disk which is also available as shareware.

AMUSEMENTS & DIVERSIONS

3 Ball Juggler
(1 disk)
Author: First Magnitude
Registration: \$15
Performance: 8/10
Ease Of Use: 9/10

Requires EGA

Yes, now your PC can teach you how to juggle your balls. Using EGA graphics as a minimum, a neat, animated character shows you how to perform a wide variety of tricks. You can try some juggling yourself using the keyboard and you can slow the speed right down to get a better idea of how it's done. The program teaches all the fundamentals of three ball juggling and demonstrates some common mistakes most beginners make. Graphic and text instruction of several tricks are also provided so once you've got the hang of

the basics, you can start showing off.

A challenging multi-level non-violent arcade game is also included. This game simulates juggling with control over each hand by the computer user. 'Armless fun.'

CLASSIC GAMES

Two Can Play
(one disk)
Author: Various
Registration: Various
Performance: 8/10
Ease Of Use: 8/10

Three great games which make good use of EGA or VGA graphics but will also operate on Hercules or CGA based systems.

Boggler is a word game that challenges the players to find as many words as possible from a 4x4 square of random letters. Players can connect the letters to form words. The path connecting letters does not have to be straight — you can connect any letter to any other adjoining letter to form large words. The only restriction is that you can use each letter only once per word. DoubleCross is a strategy game for two players. The goal is to build a solid connection between two sides of the

playing board. Each player tries to connect their sides while blocking their opponent's attempts to do the same. Pentrix is a strategy board game for two players. It was originally written for color VGA displays and EGA support was added later. This version also incorporates the ability to run in text-based mode for universal compatibility. The text mode uses block-graphic characters and retains all the playability of the graphics versions (including point-and-click mouse support). All display modes are supported

Mummy's Busy
(one disk)

Author: Various
Registration: Various
Performance: 9/10
Ease Of Use: 9/10

The title sums up the thinking behind this collection of games for young children (suggested age range 4-10)

Cards is based on the popular TV program called Play Your Cards Right. You have to guess whether the next hidden card is going to be higher or lower than the one on display. Points are awarded for successful answers.

Memory is a game of

Wibbling Wilf & the Dunjax
(one disk)
Author: Various
Registration: Various
Performance: 8/10
Ease of Use: 9/10

Requires CGA

Wilf is in a spot of trouble. Can you guide wibbling Wilf around the maze madness? His only hope of survival is to fill in the mazes flung at him by the evil jelly-like glumphs. Wilf fills in the mazes with jam. Boy! Does this make the glumphs angry! So angry in fact that occasionally the glumphs unleash their deadly weapon. Codenamed "Frank" the glumphs' secret weapon is cunningly disguised as a boiled sweet. But do not be fooled by this.. it will do its level best to eat up your jam. Frank is indestructible, but the glumphs can be zapped by firing pom-poms at them. Watch out though, because they quickly come back! Sound Blaster music card. Yes! This program features amazing digitised sound effects. Sorry, but you'll only be able to hear them if you own a Sound Blaster-compatible music card. Dunjax is a side-view action game challenging you to shoot and jump/levitate your way through massive underground labyrinths filled with hazardous traps and relentless creatures. Full-screen tile graphics are used to simulate the dungeons about you. As an intrepid astral explorer you have discovered many uncharted solar systems and their respective planets. On your latest starship-propelled expedition you have found a previously unknown planetoid with a liveable atmosphere, a rarity of outstanding proportions. However, in attempting to touch down on its surface mechanical problems have caused you to crash land on a muddy mountain basin, your ship nearly meeting destruction. This game's compendium disk also includes Bit-Bat, Droid, Robotron and Leaper.



Concentration or Pelmanism. A deck of 54 cards is laid out face down. You try to match the cards. If the two cards match you receive two points and they will be removed. The cards are animals and there are four of each, with the exception of hyena, of which there are only two. Matching the hyena cards will give you four extra points. Be careful: if you match cat and mouse or hawk and dove you will lose two points — they hate each other. But, on a one-time basis, if you match dog and horse or lion and tiger you will get a bonus of two points — they love each other. Wari is played on a board which has 12 compartments arranged in two rows of six (the arrangement is similar to that of an egg carton). The numbers of the side represent the quantity of the computer's 'counters', and the numbers on the lower represent the 'counters' on the player's side. A movement consists of taking all the counters from one compartments on your side and distributing, one counter into each of the adjacent compartments in a counterclockwise direction. You score points by capturing counters. A capture occurs when you sow your last counter in an opponent's compartment which previously contained either one or two counters. The counters from that compartment are then removed from play. The game can end in several different ways. Play must end however when the board is empty and all the counters have been captured or whenever one player has captured more than half of the counters. Wari also permits a stalemate, where each player chases the other around the board fruitlessly. Numgame is a counting game for 5 year olds. It asks the child to count up the faces on the screen and type the number. Remind them to press the Enter key after entering the number. Finally, Battle is a straightforward shoot 'em up game for seven's.

STOCKS AND SHARES

Noyes Investment Ledger (one disk)
Author: James Noyes
Registration: £18 UK

Performance: 7/10

Ease of Use: 7/10

The author has produced an investment program which is fairly easy to use. It is assumed that you have been using manual records so far and know a little about book keeping.

Data is entered on to a main input form on the screen. Once you have mastered this part of the program, the various reports will keep a good control over your investment portfolio.

The author is an accountant who has spent many years sorting out manual and computerised accounting problems and is therefore well suited to creating a program which is appropriate to the task without confusing the user with jargon and complex setting up procedures. The Investment Ledger features analyses of purchase and sales of investments, calculates the profit and losses and analyses cash payments and receipts.

There is also a bank reconciliation facility, memorandum database, and several reporting functions. It can handle up to 99 cash/bank accounts, 999 nominal ledger headings and a maximum value of posting currency of £100 million which should prove more than enough for most investors!

HOBBIES & PASTIMES

The Gardener's Assistant

(one disk)

Author: Shannon

Software

Registration: \$25

Performance: 6/10

Ease of Use: 9/10

Most hobbies and pastimes are enhanced by sourcing information on the subject and getting things better organised. As with most things, the PC can come in handy.

Not much software has been written on the subject of gardening, Landscape Plants (reviewed earlier) and this one, Gardener's Assistant, are about the only two we know of. They are American and therefore some of the plants and weather conditions are not applicable to the UK but most of the information is still relevant.

Gardener's Assistant was designed to help gardeners plan and plant their vegetable patch and obtain optimum performance from the soil they

use, the seeds they plant and the seasons.

It works on both mono and graphic display adapters but not on Hercules. The graphic adapter displays are more flexible.

Registration entitles you to a copy of the 60 page manual, notification of up-dates, and reduced price upgrades.

ASTRONOMY

The Night Sky (four disks)

Author: A C Stevely

Registration: £24.95

Performance: 8/10

Ease of Use: 8/10

The Night Sky is a computer planetarium capable of plotting depending on your disk system, either 24,000 stars to magnitude +7.49, or 45,000 stars to magnitude +8.49.

It is a very easy to use menu-driven program. This program was written by an amateur astronomer who, when he is not looking at the stars, drives a London Transport bus!

He has spent many hours working on The Night Sky, which was originally started as an exercise in programming. Only when it was almost finished did the author think of distributing it as a shareware program by which time it had expanded to four disks.

Users can select from 28 different locations worldwide. If your city is not on the list then you will have to look up the altitude and longitude of your city in an atlas.

For anyone interested in the subject and for serious astronomers this program is a must. Best used on a hard disk.

EXPLORING

Exploring Physics (one disk)

Author: Bruce N. Baker

Registration: \$20

Performance: 8/10

Ease Of Use: 9/10

Exploring Physics comprises a suite of programs for secondary school students and covers:

— Classical Physics Menu — Traditional physics formulas. — Relativity Physics Menu — Formulas for velocities approaching the speed of light. —

Electrostatics/Dynamics Menu — Formulas involved electricity. — Optics Menu — Formulas dealing with the study of light. — Math Menu — Process vector and quadratic equations. — Conversion/Calculator Menu — Convert units and perform simple math. — Display Information Menu — Formulas and equations displayed.

Each subject is split into a series of sub-categories. For example, Electrostatics/Dynamics covers a) Coulombs Law. b) Electric Field and Voltage Potential by a single particle. c) Series Capacitors. d) Parallel Inductors. e) Parallel Resistors. f) Inductance Defined. g) Parallel Plate Capacitance.

The subjects are handled well and this disc comes highly recommended

Exploring Chemistry

Author:

David W. Ostler

Registration: \$29.95

Performance: 7/10

Ease of Use: 7/10

This disk features two programs designed to aid secondary school chemistry students.

The first is Elements which presents the periodic table on the screen giving information about Atomic Numbers and Atomic Weights along with the standard symbol for each element.

The Periodic Table appears to be fairly up to date and it features elements that have not even been named yet. It can also be printed out.

The information and periodic table can be presented on any type of monitor screen and graphics card but, as with most programs, is clearer and better-presented on EGA or VGA.

The second is Molecule which is an interesting introduction to molecular structure, illustrating the subject graphically.

Exploring Maths (one disk)

Authors: Various

Registration: Various

Performance: 8/10

Ease of Use: 8/10

This suite of programs, an upgraded version of a pop-

ular title, is ideally suited as a tutorial and revision aid for secondary school maths students. By using a PC-presentation they make the subject easier to understand and absorb.

Topics covered are Algebra, Fractions, Areas and Volumes.

Problem solving exercises are presented by the program and these may be amended by the parent or teacher. Answers are checked for accuracy and scored.

FILE AND DISK MANAGEMENT

DOS Toolbox (two disks)

Author:

Computer Tyme

Performance: 7/10

Ease of Use: 7/10

The Computer Tyme DOS

ToolBox contains powerful and simple to use utilities. Some of the programs are written for beginners, others for intermediate and advanced users. The Computer Tyme DOS ToolBox programs come with help screens and on-line documentation which give quick proficiency with each program. The toolbox was originally written in 1985 to provide the same functions for MS-DOS as a program called Sweep did for CP/M. The main function of this program is to be able to select files from a list of files, then either copy them, move them, or delete them. Thus the design of this program is such to make these functions as easy as possible.

The files are displayed in a vertical list. The up and down arrows, page up, page down, home and end keys move you through the list. The 'G' (GOTO) command is provided to help you get to a desired place in the list quickly. Files are selected (marked) using the right arrow key, and unselected (unmarked) using the left arrow key. All files can be marked using Ctrl-Right Arrow and unmarked using the Ctrl-Left Arrow. A wild card mark is provided to mark all files that match a particular mask. When files are marked they are simultaneously highlighted for action.

For anyone with a lot of 'housekeeping' to do on the mass of anonymous files which have accrued on hard and floppy disks (and who hasn't?)

this is a very useful tool which lets you get things sorted out efficiently.

Maxiform (one disk)

Author: Herne Data

Systems Ltd

Registration: \$10

Performance: 9/10

Ease of Use: 9/10

Are you tired of running out of space on your floppy disks? How would you like to fit 420k on a 360k disk, 800k on a 720k disk, 1.4 meg on a 1.2 meg disk, or an incredible 1.6 meg on a 1.44 meg disk?

Sound impossible? Well not any more. If you are using DOS version 3.2x or later, then this innovative new shareware program from Herne Data Systems is just the thing for you. Using Maxi Form for all your floppy disk data storage needs is like getting an extra one and a half disks free with every box of floppies that you buy.

In most cases, no special software driver programs are required to access these disks from DOS. However, in cases where reliable standalone operation cannot be achieved (it is a complex function of ROM BIOS details, DOS version and disk controller characteristics), the simple device driver SMAX.COM can be used to patch the BIOS code and provide resident support.

To use Maxi Form you will need a 100% IBM compatible computer (PC, XT, AT, PS/2, Convertible, etc) with at least one 360K 5.25", 1.2 meg 5.25", 720K 3.5" or 1.44 meg 3.5" floppy drive. The 1.44 meg drive can be used to format 800K 3.5" disks; and the 1.2 meg drive can also be used to format 420K disks or 800K 5.25" disks. Note that with many BIOSes, you will need to use the TSR driver program SMAX.COM supplied with Maxi Form to read and write MAXI-style disks (especially 800K, 5.25" disks).

Integrity Master (two disks)

Author:

Wolfgang Stiller

Registration: \$35

Performance: 8/10

Ease Of Use: 8/10

Integrity Master combines several useful disk management and file recovery

functions with powerful virus detection and elimination. It claims to recognize known viruses by name and will describe their characteristics and then guide you through their removal.

It can detect not only existing viruses, but will detect as yet unknown viruses. This means that, unlike other programs, which you must constantly update to keep ahead of the current crop of viruses, Integrity Master needs no updating.

Integrity Master will detect any form of file or program corruption, not just that caused by viruses. This makes Integrity Master a useful tool to provide PC security, change management and hardware error detection. Why spend your time merely checking for viruses when you give your PC a complete check out with Integrity Master?

Integrity Master can reload system sectors on disks which are so badly damaged that DOS can no longer recognize them. It is useful as an aid to PC security. If someone changes, adds or deletes any of your files you will know. You can run your normal test programs to check if your disk drive is working OK. It will even detect if a disk error damaged some data yesterday.

Flexibak Plus

(one disk)

Author:

Adrian Mardlin

Registration: £29.95

Performance: 8/10

Ease of Use: 8/10

Flexibak Plus is a flexible, easy to use hard disk back-up system that takes a logical, simple and unique approach to the back-up problem.

With a conventional back-up system, you are required to take a full back-up approximately once a week and do daily incremental back-ups which are placed on separate disks. Should you need to restore from the back-up, you must first restore the full back-up and then each of the incremental back-ups up to the last back-up taken.

With Flexibak Plus, all this is different as the concept of full back-ups and incremental back-ups is removed. Instead, you only need to take a full back-up once and then all subsequent back-ups are placed on the same back-up disks, giving some long

term speed increases, simpler file restoration and an improved back-up management capability.

USING THE COMPUTER

Getting Started on Computers (One disk)

Author: Amir Pirouzan

Registration: \$15

Performance: 9/10

Ease of Use: 9/10

There are quite a few programs on the market which are intended to teach the computer. Many of them suffer from over-complication and do not allow sufficient 'space' for the totally new user to get to grips with the subject matter. Often they do not deal with the basic practical necessities of getting started.

Now, the author of Professor 3T has come up with a really practical first-step tutorial for PC users which does not make any presumptions about the user's existing knowledge, nor does it drone on and on about DOS commands.

The Professor 3T First Tutor teaches novices from scratch and covers practical topics starting with How To Switch On The Machine! Subjects covered include Sources of Misunderstanding, Computers Simplified, Hardware, Memory, Software, Human and Computer Languages, Programming Languages, Number Crunching, Program Organisation. It tests and scores and even issues a printed certificate.

If you need it First Tutor offers a wealth of knowledge and a comprehensive computer literacy course. Recommended to anyone who wants to know more about the PC without wanting to be baffled by tech-speak.

PC-Tutor

(one disk)

Author: Computer Knowledge

Registration: \$15

Performance: 9/10

Ease of Use: 8/10

The majority of PC users have little or no knowledge of the way in which the computer and

user interact, ie, the operating system. It is true to say some knowledge certainly is needed even to undertake a few simple tasks, such as finding out what is on a disk, deleting files, copying files, taking back ups and formatting blank disks.

Most PC manuals are virtually incomprehensible to the newcomer. Reading them can often make matters worse. What better way to learn how to use your computer than on the computer itself?

The author of PC-Tutor has gone to great lengths to ensure that his program helps, not hinders, and he does not assume any previous knowledge. The course is interactive, presenting the user with information, then asking for a response on the keyboard.

The program covers computer history, introduction to DOS, computer terminology, sub-directories, hardware, batch files, the keyboard and an introduction to programming.

Material is presented in a series of screens and the user has the ability to move forward or backward through the tutorials, or jump to selected locations using a menu. Short quizzes test you on your knowledge but you may bypass these when reviewing

Fasttype

(one disk)

Author: Trentech

Registration: \$20

Performance: 8/10

Ease of Use: 8/10

Fastype is a typing instruction program specifically designed for PC styled keyboards. These quick-start instructions will get you going right away. You must have a Colour/Graphics Adapter Card (CGA) or equivalent (EGA), (NOT Hercules)

For Drills: Place the fingers of each hand on the home keys (ASDF JKL) and type each letter as you are prompted for it. The selection of letters to type is random: the number of characters you successfully type is displayed before you start. When the drill is finished your WPM and other data will be displayed in the text panel. For Lessons: type each character pointed to by the cursor and when you reach the symbol, press the enter key (Y) (for

carriage-return). When you finish the lesson your WPM and other data will be displayed in the text panel.

There are 5 drill, lesson, and feature selection menus and two sub-menus for selecting additional keys to learn. The primary menus can be displayed by pressing function keys F1 to F5 anytime while the screen keyboard is displayed. And, while any selection menu is displayed you can go to another menu either by selecting it from Menu #1 or by first holding down the ALT key and pressing F1, F2, F3, F4, or F5. All menus have the Help Facility available

DOS Summary

(one disk)

Author:

Computer Tyme

Registration: Freeware

Performance: 7/10

Ease of Use: 8/10

A good companion to the PC-Tutor and from the same author. There is no registration fee - the program is yours for the price of the shareware copy.

For anyone who is likely to use more than one or two DOS commands this program is invaluable.

When starting DOS Summary you have the option of accessing either an alphabetical menu of DOS commands or a menu where commands are grouped by function.

A second way of accessing a command is by starting the program with a command name as a parameter. DOS Summary will find the closest match to the command you entered - so exact spelling is not necessary. Only DOS commands are in this version; batch commands and CONFIG.SYS commands are not. Support is given up through DOS version 4.01.

MENU SYSTEMS

Menu Direct Gold

(two disks)

Author: Applied Micro Systems Technology

Registration: \$39.95

Performance: 9/10

Ease Of Use: 8/10

Menu Direct Gold is the new name for the Point & Shoot

Hard Disk Manager originally released as a commercial package. It was nominated for one of BYTE's best product awards at Spring COMDEX 1991.

For anyone with a hard disk full of assorted programs and files located in a variety of sub-directories it makes excellent sense.

Menu Direct Gold is essentially a file/directory/program manager but offers a wide range of associated features that make it very powerful. Yet the author has ensured that all functions are easy to use and clearly explained.

The program offers unlimited user menu entries with single keystroke execution of programs. Split screen file list and directory tree.

The normal Copy, delete, edit, find, print, and view single or tagged files, Delete, make, rename, hide, and print-directories are offered plus the very useful Undelete files and directories.

Instant DOS access, user-defined program colours, floppy disk formatting, and mouse support are all provided. Menu Direct Gold features Pull-down menus, hypertext help system, password protection, usage logging and a host of other features make this an excellent DOS Shell.

Power Menu

(one disk)

Publisher: Shareware Publishing

Registration: £49.95

Performance: 9/10

Ease of Use: 8/10

One of the biggest frustrations for a new user of a PC is the unfriendly operating system which comes with it (unless of course you are fortunate enough to have a high performance computer and Windows)

A newly unwrapped computer with a hard disk drive will probably just present you with the C> prompt when you switch it on. You then have to know about sub-director tree structures, DOS commands and the appropriate name to type in to get any programs running.

To overcome this problem several authors have written new 'front-ends' to MS-DOS which improve the interface between you and your programs.

These are usually in the form

of an on-screen menu system which lists the options and programs available, tells you which keys do what.

Power Menu is one of the best examples of the genre. It is easy to install and menus are completely user-configurable. You just type in the title you require, the name of the program and where it can be located. Plenty of on-screen context sensitive help is provided and there are several useful additional utilities if you want them.

Disktree

(one disk)

Author: Richard Smith

Registration: \$20

Performance: 9/10

Ease of Use: 8/10

Making order out of the chaos of thousands of files contained on even the smallest of hard-disk drives is both important and incredibly tedious.

Without control and order, files get lost, space gets wasted and productivity drops as users spend more and more time just keeping track of what files are where.

Of course, in a perfect world, users would save their data according to a sensible and logical standard of what files should go where. Unfortunately, no one does this with any real conviction and when things get confused, there is no quick way of sorting the mess out.

DiskTree is an attempt at creating an affordable, powerful and above all, easy-to-use disk management tool. It offers full Microsoft mouse support, extended screen resolutions, i.e. 43 and 50 line modes, up to 26 drives in memory at once and between 10,000 and 13,000 files and directories held in memory.

Should be quite capable of keeping your files in order!

Important

The prices given are for registration of the programs. You **do not** have to send this amount when you order disks from Advantage Shareware. Please send just the amount specified on the order form for each disk and postage and packing.

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ading the review in PC it was awarded one star), as that the only way in could be produced to the niga would be to make it only, which would make slow, particularly in the went ahead and bought it review must have been the Amiga and it would unfortunately, it was.

late complaint, but my excuse made by Anco true then, but now with people owning 386 % of the new releases disk and 20MHz at the isn't it about time Anco rsion of Kick Off, or at or 386 machines only. I er this data disk being old PC Leisure - where is

have to invite myself into friend's houses so as to e game for ever? Or is to produce a PC version worth having?

arts
on't say what type of card you have, Antony, it works happily with thing else, I think it's ly to be "non-standard" apta at Anco tells us

internal speaker. I have read about the Gravis UltraSound but I have not seen any shop selling it. Has it been released on to the market yet?

Nick Pomfret
Barford
Warwickshire

Without knowing anything else about the machine you describe, it sounds a reasonable price to me, though you'll have to contain your soul in patience for Strike Commander, which is now due for release in the autumn. PCs with 386 processors are indeed perfectly reasonable for gaming, but as ever, PC Review's advice is to buy the most powerful PC you can afford (whether that be a 16MHz 386SX or a 486). Finally, the UltraSound should be in the shops within weeks rather than months and we'll be looking at it detail in the magazine ASAP.

Helping out

You may recognise my name from Issue 6 of PC Leisure, under the QED contacts section where I offered to give people assistance with various computer games. Since that issue was published, I have been helping out hundreds of people with various games (not just the ones I had written down). During this time, I enjoyed helping

Dear PC review

Good gammon

Please could either you or your readers help me? I would like advice on whether there is such a thing as a good backgammon game available. If so, please could I have details? Chess players are well catered for, but I never see reviews of backgammon software.

N P Webb
Edinburgh

Both Software Toolworks and Oxford Softworks have produced backgammon games, which can play a reasonably fast game with a number of playing options. Unfortunately, Toolworks' version is currently only available on CD-ROM as part of the Games Pack II, but Oxford Softworks Backgammon is available on disk. Contact Software Toolworks on (0444) 246333, or Oxford Softworks on (0993) 823463 for more details.

Don't dilly with Dali

I was appalled to read the "Dangerous Dali virus due to strike" article in the

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sound of the Amiga that much, he should invest in a public domain program for the PC called Trackblaster (v2.0), available from Kwikware and other good PD libraries, which is compatible with the majority of Amiga blaster programs. He could also invest in some Amiga mods to run on it.

To finish, may I say it's not the fault of the Sound Blaster if you find the sounds in certain games below par, but the person who creates the sound.

Jeff (who appears to have no surname)

North Shields
Tyne and Wear

... Sounds stunning

I am writing in response to the two letters from your May issue (Sad Sounds and Misleading Cases). These two characters who wrote to you praising the Amiga don't know what they are on about. I am the owner of a Sound Blaster compatible sound card and the music and sound effects from this piece of hardware is unbeatable. You just have to hear the speech in Wing Commander 2 or the sound effects and music in Monkey Island 2 to know what I mean. I know a few owners of the Amiga, and even they were stunned when they saw and heard these two games.

I also have a couple of questions which I hope can be answered. Why don't you show the type of copy protection used with the games in reviews? I have twice bought key-disk games which crashed on me. I know you can send them back to the manufacturer but it is a big pain. Also, I bought Turbo OutRun off a friend and found that it does not work with DOS 5.0 but it does with DOS 3.3. I was wondering if the version in Action Masters compilation is compatible with DOS 5.0, or is there any way of making it work.

Snabal Naik
Coventry

We do try to mention copy protection wherever it is relevant in reviews and we'll make sure this is done rigorously from now on. As

for Turbo OutRun, US Gold's technical department says they've been made aware of this recently, and believe that it should only be early copies of Turbo OutRun which don't run under DOS 5.0 (or DOS 4.x either). They suggest you return your copy of Turbo OutRun to them, marking the envelope for the attention of the returns department with a full covering letter and they'll send you a replacement.

Own goal by Kick Off

I recently bought Kick Off 2 by Anco for my Elonex 386SX. After following the set-up instructions to the word I found that

all animated graphics were indistinguishable. The ball was in two pieces and the players were coloured squares. This happened in both EGA and VGA modes, where there was no apparent difference in the mess that appeared before me on the screen.

I rang Anco and they responded that I was running the game on an incompatible VGA card and there was nothing they could or would do about it. I have many VGA games, some from the late 80s, but I have never had this problem before. I am now left with a £25 game which is useless. How do I know when buying a game if it is going to be compatible with VGA cards? PC game packaging appears with the words "VGA graphics", which is the case with Kick Off 2. Has anyone else had problems running this game on their PC or is my disk bug-ridden? I've noticed that I have two files with the EGA file extension, but none for VGA.

Antony Selby
Tonbridge
Kent

And a red card

With recent releases for high performance PCs, such as Monkey Island 2, Police Quest 3, Falcon 3 and Indiana Jones and the Fate of Atlantis, being produced to such a high standard in terms of graphics, gameplay and depth, I simply cannot believe that Anco's Kick Off 2 conversion for the PC was the best they could do.

I remember reading the review in PC Leisure (in which it was awarded one star). Anco's excuse was that the only way in which Kick Off 2 could be produced to the standard of the Amiga would be to make it for 386 machines only, which would make their sales very low, particularly in the States. I however went ahead and bought it thinking that the review must have been comparing it with the Amiga and it would not be that bad. Unfortunately, it was.

I know this is a late complaint, but my point is this. The excuse made by Anco was probably very true then, but now with more and more people owning 386 machines and 50% of the new releases requiring a hard disk and 20MHz at the least to run at all, isn't it about time Anco made a decent version of Kick Off, or at least a data disk for 386 machines only. I seem to remember this data disk being mentioned in my old PC Leisure - where is it?

Am I going to have to invite myself into my Amiga-owning friend's houses so as to play my favourite game for ever? Or is Anco finally going to produce a PC version of Kick Off that is worth having?

Robert Matfin
Berkhamsted, Herts

You don't say what type of VGA card you have, Antony, but if it works happily with everything else, I think it's unlikely to be "non-standard"

In this case, Anil Gupta at Anco tells us

that while there can be display problems if you have a Super VGA card rather than standard VGA, your description doesn't match those particular glitches. It sounds to me as though your disk is faulty, and needs to be replaced by your dealer.

Kick Off 3 is due out for the PC at the end of this year, and will, we hope, address the problems of the existing version to give us a game approaching the playability of other formats.

A mother of a PC

I have recently found myself in the market for a new computer due to a little money I happened to come across one day. I've spotted a rather nice 486 33 with SVGA and a 105Mb hard disk for about £1,300 (including Vat). I cannot wait to get Falcon 3.0 and Strike Commander.

Is this a good price for the computer? Would I be better off getting a slower one as I am only going to be playing games on it. There seem to be a lot of 386s around which seem perfectly reasonable for gaming.

Actually, there is another reason for wanting a 'mother' of a computer. I have a friend with an Amiga, well, a CD-TV, and he is constantly putting the PC down and bragging about his machine. I admit its graphic capabilities are good and the sound is excellent, but a 486 should shut him up for good.

I am also in dire need of a sound card after years of burpy grunts coming from my internal speaker. I have read about the Gravis UltraSound but I have not seen any shop selling it. Has it been released on to the market yet?

Nick Pomfret
Barford
Warwickshire

Without knowing anything else about the machine you describe, it sounds a reasonable price to me, though you'll have to contain your soul in patience for Strike Commander, which is now due for release in the autumn. PCs with 386 processors are indeed perfectly reasonable for gaming, but as ever, PC Review's advice is to buy the most powerful PC you can afford (whether that be a 16MHz 386SX or a 486). Finally, the UltraSound should be in the shops within weeks rather than months and we'll be looking at it detail in the magazine ASAP.

Helping out

You may recognise my name from Issue 6 of PC Leisure, under the Q&A contacts section where I offered to give people assistance with various computer games. Since that issue was published, I have been helping out hundreds of people with various games (not just the ones I had written down). During this time, I enjoyed helping

people immensely, but the calls are finally starting to die down.

As the column in PC Leisure was so successful, I wonder if you could start another similar column in PC Review. I think this kind of assistance to readers is much easier than using the many helplines available from software companies because they are often engaged.

If my request could be considered, then I would be pleased if you could include my name with my new list of games that I can help with: King's Quest I, II, III, IV and V, Space Quest II and IV, Leisure Suit Larry I, II, and III, Monkey Island and Monkey Island 2, Indiana Jones and the Last Crusade and Hitchhikers' Guide to the Galaxy.

I'd be happy for my phone number to be published: 0442 833833, and I'm available at any time.

Tom Barnes
Bovingdon
Herts

PC Review
REVIEW...
REPORTS

Anyone who wants to offer assistance on a general, on-going basis should write to QED at the usual PC Review address with details. Do check with the rest of the household that it's all right to offer help over the phone, because it's hard work and you can guarantee you'll get lots of calls at the most inconvenient times.

Falcon update

When reading your review of Falcon 3.0 in Issue 4 I was dazzled by the game, the graphics, complexity and vastness until ... I read the part about installation. I know nothing really of DOS, let alone DOS 5, which even my Dad has difficulty understanding. So when I heard MicroProse was going to re-release it after taking out all the flaws on DOS and internal speaker (hopefully) I was very pleased and decided to get it then. But how do I make

sure I get the new version when buying Falcon 3.0? Also I would appreciate it if you could tell me when MicroProse is releasing it.

Rabul Sareen
Wembley
Middlesex



The new version is in the shops now, and there shouldn't be any danger of buying the wrong version.

The Falcon bugs became a major topic of conversation in bulletin boards in the US, and most people doubted everything would be sorted out in a single release. MicroProse says, however, that its new edition is clean, and we'll be carrying an update in the next issue.

Configuring Wing Commander 2

I've just been reading the letters page with regard to the people having trouble with Wing Commander 2, specifically Graham Keen and Leigh Caddy.

Firstly, Graham. Why on earth is he allocating 32-plus megabytes of expanded memory in his Config.sys, and poor old Leigh has only 587K of memory free.

These are the relevant lines I use in my own Config.sys file:

```
DEVICE=C:\DOS\HIMEM.SYS
DEVICE=C:\DOS\EMM386.EXE 1024
M9 RAM
DOS=HIGH,UMB
```

I also have several TSRs loaded and still have 626K of memory free. Bear in mind that the above will only work on 80386 and above machines, and you really need DOS 5.0. Some machines might replace EMM386.EXE with EMM386.SYS, which can be used exactly as above.

Line one is loading the extended memory manager, which also gives you access to

the high memory area (HMA). This is the first 64K of memory after the normal 640K limit.

Line two loads EMM386, which is an expanded memory manager, and also gives you access to the upper memory blocks, which are just a larger area of RAM between the normal 640K limit and 1Mb, which you can't normally access otherwise. 1024 is 1024 bytes of memory allocated as expanded memory, usually enough for most games, but you can up this to 2048 if necessary. There is no way you'll need 32,768 bytes, even for Wing Commander 2! The M9 switch relocates the 64K expanded RAM page higher up in extended memory, leaving a larger free block of RAM lower down, and the RAM switch turns on EMM386's ability to access upper memory blocks. Normally this function is disabled when you use expanded memory.

Line three loads as much of the RAM resident DOS operating system into the high memory area as I can. The UMB switch just tells the system that the upper memory blocks are there, so use them!

After this replace all your Device commands with DeviceHigh, and use the command LoadHigh in your Autoexec.bat file (this can be abbreviated to LH), before all your TSRs, ie,

LH C:\DOS\MOUSE.COM

Most TSRs should work, but if they don't you'll have to resort to loading them normally.

Martin Spencer
Worthing
West Sussex

Takeaway chips

With reference to your reply to Anthony Steele (Q&A, Issue 6) who wants to increase the speed of his IBM PC XT, you neglected to mention the other solution of replacing the 8088 CPU chip with an NEC V20. Doing this will nearly

WINNERS

Chess competition (Issue 6)

This slightly out-of-the-way competition (since the prizes weren't PC-specific) generated a healthy postbag for the chance to win one of the excellent Mephisto range of dedicated chess machines. It was also one of the few competitions in which we had a virtually 100% correct entry.

Anyway, first out the hat and the proud winner of the Mephisto Milano chess machine is **Keith Findlay**, of Ellon, Aberdeenshire. Well done, Keith.

Six My First Mephisto devices go to the following runners-up: **N Ford**, of Burton-on-Trent; **Mrs P L Law**, of Lanceford, Bristol; **Visharad Venugopal** of Cardiff; **B Smith**, of Brighton; **R Hacker**, of Carlisle, and **Philip Moyes**, of Mickleover, Derbyshire.

The answers for anyone still mulling over the diagrams: diagram A showed the possible bishop's moves; B, the rook's; C, the king's, and D, the knight's.

Flying lessons (Issue 7)

The winners of this competition will be announced in the next issue.

double the existing speed from 4.77MHz to over 8MHz at a very minimal cost of around £15. These cpus are obtainable by us should anyone want one.

SS Computers
16 Keer Avenue
Canvey Island
Essex SS8 7NS

"Complete" con?

You seem to have a problem describing the programs you put on your cover disk. On the April 1992 cover disk you have printed "Blox - a complete brain-bursting puzzle game". Not until you have loaded the game do you find that it is in fact not complete, but only four levels of a shareware game and to get the complete game you have to register with Mr Richard L Wright of Richmond. Now, seeing that your grasp of the English language is not as good as mine, I have included the definition of the word "complete" so you will not make this mistake again:

Reference Oxford Minidictionary: complete, a. having all its parts; finished, thorough in every way.

Reference PC Review Minidictionary: complete, a. two halves joined together to make one.

I thought there were laws governing the way things are described. And before you attempt a sarcastic comment at the base of my letter, I have been a regular reader of your magazine right from the first issue of PC Leisure, so watch it.

Simon Constable
Chesham
Bucks



Blox is a complete game. Not a very big one maybe, but if you bought Blox from a shareware library, what you would receive is what you got on the cover disk. Shareware authors invite you to register for two reasons: firstly, to recoup some of the costs of writing and duplication, and also to pay for later updates or more detailed documentation to the original program. In the case of Blox, Richard Wright chooses to offer four extra levels, but if you applied this as meaning 'incomplete' to other programs, you could argue Lemmings isn't complete until you've bought Oh No! More Lemmings, SWOTL incomplete until you've bought the extra missions disk, etc. I hope that wasn't too sarcastic for you, Simon.

PC Review welcomes letters on any subject under the PC sun. The editor will chop them to fit the space if need be, and we'll assume letters are to be considered for publication unless you specifically state otherwise. Send all correspondence to Letters, PC Review, EMAP Images, Priory Court, 30-32 Farringdon Lane, London EC1R 3AU. If you have access to CIX (Compulink Information Exchange) you can send your letters to our mailbox - our ID is pcreview. Star Letters win software prizes!

ON THE SPOT

PC Review arranges regular visits to the UK's top PC companies, taking with us a selection of readers who have filled in the form below. This gives you the chance to talk to various movers and shakers within the industry: interview them, ask them about their PC plans, how they design, write, produce their games, why PC games are so expensive (you might as well, everyone else asks that). The exact nature of the visit, and the degree of formality, depends on the companies concerned, but you usually get a chance to see some sneak previews of forthcoming products, meet the programmers, and have a guided tour of company HQ.

A full report of the visit then appears in a later PC Review - useful for those who didn't go, because they'll read the answers to the questions you asked. In other words, the issues which you, the readers, care about, rather than we think is important.

Next month, you'll be able to read about our trip to Microprose, the flight sim specialist.

If you want to take part in an On the Spot visit, fill in the form below and send it to: On the Spot, PC Review, EMAP Images, Priory Court, 30-32 Farringdon Lane, London EC1R 3AU.

Note: we don't take very many people at any one time, so that if selected, you'll have every chance to have your say. Because of this, the places get filled quickly, but we'll be doing return visits to all the most popular companies. If you miss out the first time round, sit tight, because another visit to the same place will come up and we don't throw your forms away.

Name.....

Address.....

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.....

Daytime tel no:.....

Evening tel no: (leave this blank if you prefer)

Age: Under 16 16-25 25-40 Over 40

NB if you are under 16, please get your parent or guardian to sign this form as well giving their consent for you to take part.

Which company would you like to visit?

Domark Virgin Mindscape Bitmap Brothers

Psynopsis Other (if applicable)

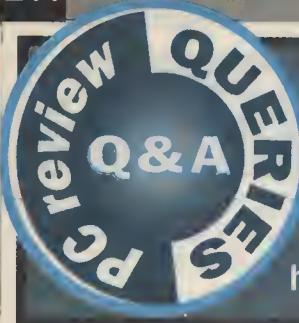
Any particular reason for your preference(s)?

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Send this completed form, or a photocopy, to
On the Spot, PC Review, EMAP Images, 30-32
Farringdon Lane, London EC1R 3AU.



Bemused, bothered or bewildered about the mysterious workings of your PC? Confused by hardware options? Stricken with software seize-ups? Share your problems with Q&A's Mike James and he'll endeavour to help.

DR-DOS versus MS-DOS

If I buy DR-DOS will it run all the software which is MS-DOS compatible? And second, will VGA software work on a SVGA card and monitor?

John Mulvany
Aberdeen

The answer to both your questions is yes.

But you wouldn't expect me to leave it at a one word answer, would you! First the easy bit. The answer to the SVGA card really is just 'yes' as it runs all the original VGA modes on an SVGA monitor, so you lose nothing.

The DR-DOS part of the question is not quite such a clear-cut 'yes', because software is like that. DR-DOS is a nice alternative to MS-DOS 5 and it does have some advantages but you can never guarantee that all software designed to work with MS-DOS will work perfectly with DR-DOS. All I can say is that it isn't a big problem and I can't think of anything major. I suppose the situation is best summed up by saying that if I already had DR-DOS I wouldn't make any efforts to get rid of it but otherwise I would pick MS-DOS 5 just to be sure I was 100% compatible.

486 upgrade wanted

I am currently using a 386SX-16 using 5Mb of memory (EMS) and have a 90Mb hard drive, Sound Blaster card and twin floppies of both sizes. I am also thinking of buying a 387 maths co-processor for it.

My problem is this. I would like to either buy a new 486-33 or upgrade my present computer to a 486-33 (preferably 256K) by changing the motherboard. Is it difficult to do — I would like to do it myself, both to cut costs and to learn more about computers?

Michael Hurt
Sutton
Surrey

As long as the existing motherboard is in a standard size case then it should be very easy indeed to change. Going from a 386SX to a 486 is one of the easier changes because you can carry on using all of your existing hardware — hard disk, hard disk controller, etc — and you don't even have to reconfigure it. The only hidden cost might be

the new RAM that you have to buy. The RAM installed on the 386SX motherboard is likely to be too slow to work with a 486 and so would have to be replaced by new devices.

You will learn a lot about your machine by replacing the motherboard and be in a better position to deal with problems and future upgrades. For more information about motherboard replacement I can recommend a new book, *Inside The Grey Box* by Dr P D Coker (ISBN 1-871962-14-5, £14.95) which goes into the practicalities in some detail.

Slowing things down

I am having problems with Gunship 2000. Firstly, while playing the game with a joystick, the centring becomes more erratic as the game goes on, making the game very difficult to control. Secondly, whenever I land back at base or get shot down during a mission the game locks up and I have to reboot. I have phoned MicroProse about the problem and they have replaced my original disks. They also suggested I started it with a system disk to increase the memory and also by using the DOS Loadfix command. I have tried both these but they do not make any difference.

The strange thing is that the game seems to work normally with a slower speed (10 MHz).

This also happens on the Supaplex demo on March's PC Review which locks up, unless the slower cpu speed is selected. I have other games like F15 II that work fine at the faster speed. It seems crazy to have to select a slower cpu speed on such a new game especially as the graphics are slightly smoother at the higher speed.

My computer is a Multiplex 386DX 33MHz (switchable to 10 MHz) with 4Mb RAM, VGA graphics with 1Mb video RAM, 115Mb hard disk. I also have a Sound Blaster board fitted with an Analog Edge joystick. I use MS-DOS 5.

C C Webb
Kings Lynn
Norfolk

You seem to have tracked the problem down in that you know that it goes away at the slower speed. A higher processor speed does sometimes cause problems running software — that's why there is an option to run at the slower speed. However, most new software, and certainly the two that you quote, work fine at the higher speed. This suggests that there is a problem in the joystick interface. As well as the processor

Speeding up the Amstrad 2086

Please help me! I have an Amstrad PC2086 hard disk computer and I would like to know if it is possible to increase the processor speed from 8MHz to 16MHz or 20MHz. I am told that you can change the motherboard or add an accelerator card, but I'm not sure how you do this. Obviously I want to do this to let me play the latest games without changing the whole system.

Tim Treleaven
Ashford
Devon

I have read your magazine since Issue 1 and find it very informative and if, like me, you have purchased an Amstrad 2086 it is a necessity, as it is the only

having a clock speed associated with it, the expansion (ISA) bus also has a clock speed. In most cases this is a standard 8MHz but some systems do try to squeeze the last drop of speed by running the bus faster. In most cases this doesn't cause a problem but it sometimes does with analog joystick interfaces.

Without actually getting my hands on the machine it is difficult to be sure what is causing the problem but I would suggest that you try to find out what speed the expansion bus is working at, and, if it is faster than 8MHz, try slowing it down. The only trouble is

The PS/2 range

I have recently been given a IBM 55 SX (PS/2) computer and IBM PS/2 colour display by a relative who has moved abroad. I have had it a month or so and know nothing about it because it was not left with the manuals, or even its specification explaining how much RAM, which processor, etc, it has. Please help because the games around these days need high processors (and the rest) so it is difficult to choose which ones to purchase. I have consulted several magazines to find information about the computer but have had no luck. Please, please help!

A. Vijay
Cranford
Middlesex

I have an IBM PS/2 model 30 (8086) running at 8MHz. In Q&A issue 5, you advised an owner of an XT that it is possible to fit a 386SX card to a 8-bit bus. Will this fit a PS2/30 and can I still add on things such as VGA cards and sound cards? How involved is the fitting of a new card, is it similar to fitting a soundboard?

Nick Knowles
London

The PS/2 range was intended to be IBM's replacement for the PC that we all know and love. Despite IBM's size it didn't succeed in getting its own wa

to find out if a game will run on such a low machine.

I purchased an Amstrad 2086 in December 1990 and paid £730 for a 30Mb system. I was told that the 1640 and PC1512 were old hat and I really should go for the 3.5" 2086 machine. I now feel very cheated.

Please can you tell me what I can do to upgrade the machine, and the best way of doing it, without spending more money than I could buy an Amiga for.

Andy Ridley
Nottingham

I own an Amstrad 2086/30 8MHz 640K with VGA monitor — not the ultimate games machine, but it works — and I was wondering whether I could replace the old processor with a faster one to speed things up

and maybe something to boost up the clock speed (or change the clock altogether).

Steven Edworthy
Bordon
Hants



Personally I think that Amstrad's model numbering system is potentially confusing to the customer (to put it more strongly might be libellous!). The serial numbers of the processors used in the PC are, in order of increasing power, 8088, 8086, 286, 386, 486. Now which processor do you think that the 2086 uses? No, not the 286 but the original 8086, the same one used in the 1512/1640 that the 2000 series was designed to replace. In fact all Amstrad models ending in 086 are based on the old 8086 processor, and not a particularly fast (8MHz) version at that. I'm sure that Amstrad would say that their numbering system is perfectly logical but you

that this is usually a very technical procedure involving the deepest depths of the BIOS set-up routine. Perhaps Multiplex's technical department could be persuaded to give you the exact details.

And now the PS/1?

PC Review
Your recent article has whetted my appetite for a sound card, but my IBM PS/1 already has an IBM joystick and audio card. Would I notice much improvement with an Ad Lib or Sound Blaster card? Additionally, would I need to

buy an adapter card unit, or could I use the slot previously used to hold my existing card?

R Goodliff
Spalding
Lincs

PC Review
If you think that the PS/2 is a strange family (see panel) then wait until you meet the PS/1. This is IBM's attempt to take the home market by storm — at least it is a reasonably powerful 286-based machine.

The trouble with the PS/1, from the expansion point of view, is that the basic unit doesn't have any standard expansion slots — just MIDI, Joystick and memory slots. To add something like a Sound Blaster card you would need the expansion chassis which takes three AT (ISA) style cards. There is nothing wrong with this apart from the increase in cost. As to whether or not it is worthwhile to upgrade, I can't say because I haven't heard what the IBM audio card can do, but given the costs you could probably put the cash to better use in buying a new and more powerful machine!

VGA upgrades

PC Review
Last year I was given a PC with wonderful 4-colour graphics. In Issue 2 you ran a competition to win a VGA monitor and in the grey box you said that the PC 1512 and 1640 could not be easily upgraded. Then in the Q & A section you were telling somebody how to upgrade their 1640. Does this mean you can also upgrade the 1512 to EGA or even VGA? If so is it just a new graphics card that is needed or is it more complicated?

Chris Exon
Stoke-On-Trent
Staffs

PC Review
Well I suppose it all depends what you mean by "easily upgraded" and PC Review has always tried to steer people away from upgrading graphics on these machines because of the

can see the potential for muddle. The 8086 is an XT class machine, no matter how modern the external packaging makes it look. So really you're not just asking for just a clock speed increase but a complete change of processor.

There's a lot of life left in the 8086 processor if you want to use a word processor, a spreadsheet and so on, but the latest games really benefit from a 386SX as a minimum.

So what to do about it? It is possible to add accelerator cards to the 2086 but I doubt that it is cost-effective and I also doubt that you will end up with a machine that will keep you happy for long. My recommended solution is to sell the machine to a user who wants a machine for less demanding duties such as running a business and then find a good deal on a 386SX-25 machine. Don't worry too much about brand names because they are all selling more or less the same product.

Inconvenience It causes. The trouble with both the 1512 and the 1640 as far as video upgrading goes is that they have the necessary electronics on the motherboard. Now, it is perfectly possible to bypass the on-board video electronics and install a graphics card in the usual way, and the new VGA card will co-exist with the PC1512's built-in CGA card — which can't be disabled.

However, the rub, in the case of the 1512, is that the PC will only run two cards happily if it can distinguish between them by running one in colour and one in mono. Since the CGA card is the number one card, and can't be switched out, it will inevitably be designated as the colour one, so your wonderful VGA graphics will be mono only. So the fact that it can't be disabled is a serious drawback, and frankly, not worth the expense and hassle.

The other problem is that the 1640 and 1512 are both powered by the standard monitor that comes with them and this isn't suitable for use with a higher resolution graphics card. The cost of an additional monitor plus a graphics card probably comes quite close to the residual value of the machine! So while it can be done, it probably isn't worth it unless you can find a surplus or second hand EGA (VGA is too expensive) monitor and graphics card and are prepared to spend some time setting it all up. Even in this case you will end up with two monitors sitting on your desk!

Don't forget if you have any answers or ideas to help other PC Review readers, drop us a line and we will publish them. Send your letters to Q&A, PC Review, Priory Court, 30-32 Farringdon Lane, London EC1R 3AU. If you have access to CIX, the Compulink Information Exchange, you can send your query to us there — our ID is pcreview.

A right royal DOS!



BILL GATES

Gates would be no push-over for the Princess. At 38, the Microsoft boss is America's richest man—worth £2.2 billion. No-frills Anne would love Bill's business style and they would make a great team. He doesn't suffer fools gladly and works a 15-hour day, but he still finds time to enjoy golf, tennis and swimming.

MP Matthew Taylor to be first on their list of potential suitors. "No-frills Anne would love Bill's business style and they would make a great team," trilled The Sun helpfully, although perhaps his quoted fortune of \$2.2 billion might just sway things as well.

The Sun also reported that Gates works a 15-hour day, and still finds time for golf, tennis and swimming, which even on Quit's shaky arithmetic, means that poor old Bill must be seriously short of sleep.

Finally, just as an afterthought, do you think Gates and David Mellor could possibly be related...?

Who's saying what ...?

The pictures which have arrived in PC Review's office over the past month have been disappointingly sane and dull. Sensible, ivory coloured PC packages sitting squarely in front of the camera; executives in suits wearing appropriate neutral expressions. So this time we've dug into the PC Review archives, and we thought we'd continue this month's Quit royal theme.

Isn't this picture just screaming for a caption? Whoever sends us the wittiest, most apposite caption for the picture (right), while still managing to remain printable will win a software prize.

Send suggestions to PC Review Captions, EMAP Images, 30-32 Farringdon Lane, London EC1R 3AU (preferably by July 15), and we'll print the best.

If the name fits

It was J R R Tolkien who started it all, of course. Give software designers a computer game concept and you can see that much midnight oil has been burnt coming up with those atmospheric, authentic names for people, places, aliens, tribes and weaponry.

The Krilathi in Wing Commander sound suitably alien and The Immortal's Mordamir is clearly Tolkien-inspired, while there are a host of WASP (or Jackie Collins) style inventions for lantern-jawed heroes* — Todd Marshall, Blade Hunter, Bret Conrad, "Lucky" Jake Masters ...

But what frequently strikes us is how often they simply don't seem to strike the right note. But surely Skara Brae should be one of the Scottish Isles, and Treihadwyl a village in north-west Wales (instead of indeterminate locations in Bard's Tale and Bloodwyth/Legend).

Leading contender for most inappropriate name has got to be King Graham of Daventry, from Sierra's King's Quest series. I mean, how seriously could you take Daventry's case for UDI, particularly if the pretender to the throne was called Graham?

* from Wing Commander, Rise of the Dragon, Gold of the Aztecs and Heart of China respectively.

Positive vetting

Sierra founder and author Roberta Williams evidently doesn't believe that there's no such thing as bad publicity. When we expressed an interest in having a quick word on the subject of the Dagger of Amon Ra, the Sierra hotline between Berkshire and California began sizzling with faxes.

Roberta Williams sent a questionnaire over to European HQ demanding to know the credentials of PC Review's staff writer Paul Presley. What would he use the "interview" for? Would it be published anywhere else? What would be the benefit to Roberta Williams and Sierra On-Line?

At any rate, we must have been vetted positively, since the fruits of the chat appear in Coming Soon, on page 16, but it all seems a little excessive just for "Hi, can you tell me when you expect to complete Dagger of Amon Ra?"



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15 II - DESERT STORM

"...for many recent releases a 386 PC is a minimum requirement." *PC Format '92*

It is a simple fact of computing that the more information you try to process the slower everything becomes. Not much fun when the subject is Gunship 2000 in glorious 256 colour graphics. Try playing the latest generation simulations on a 286 for example. The graphics are very 'jerky' and the response is frustratingly slow. The effect is unconvincing and not worthy of simulator status.

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